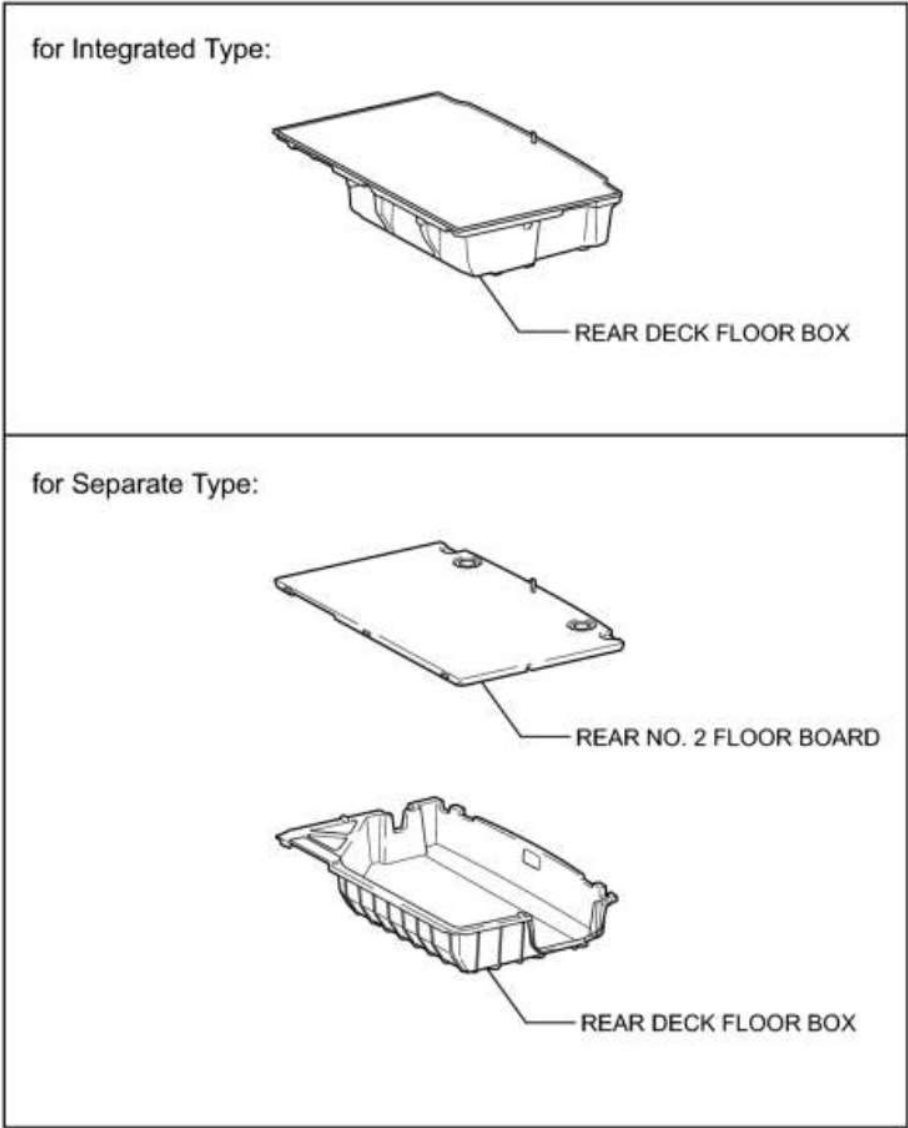


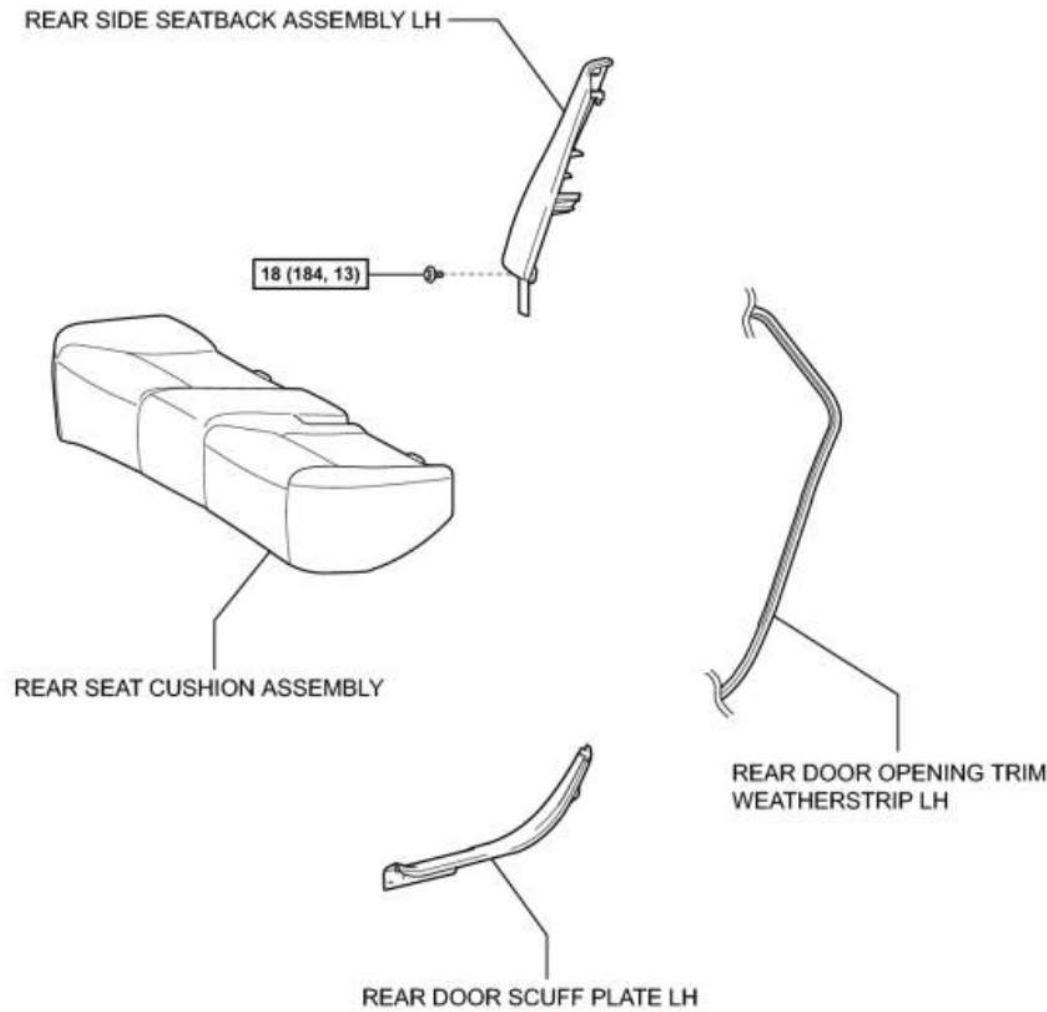
COMPONENTS

ILLUSTRATION



P

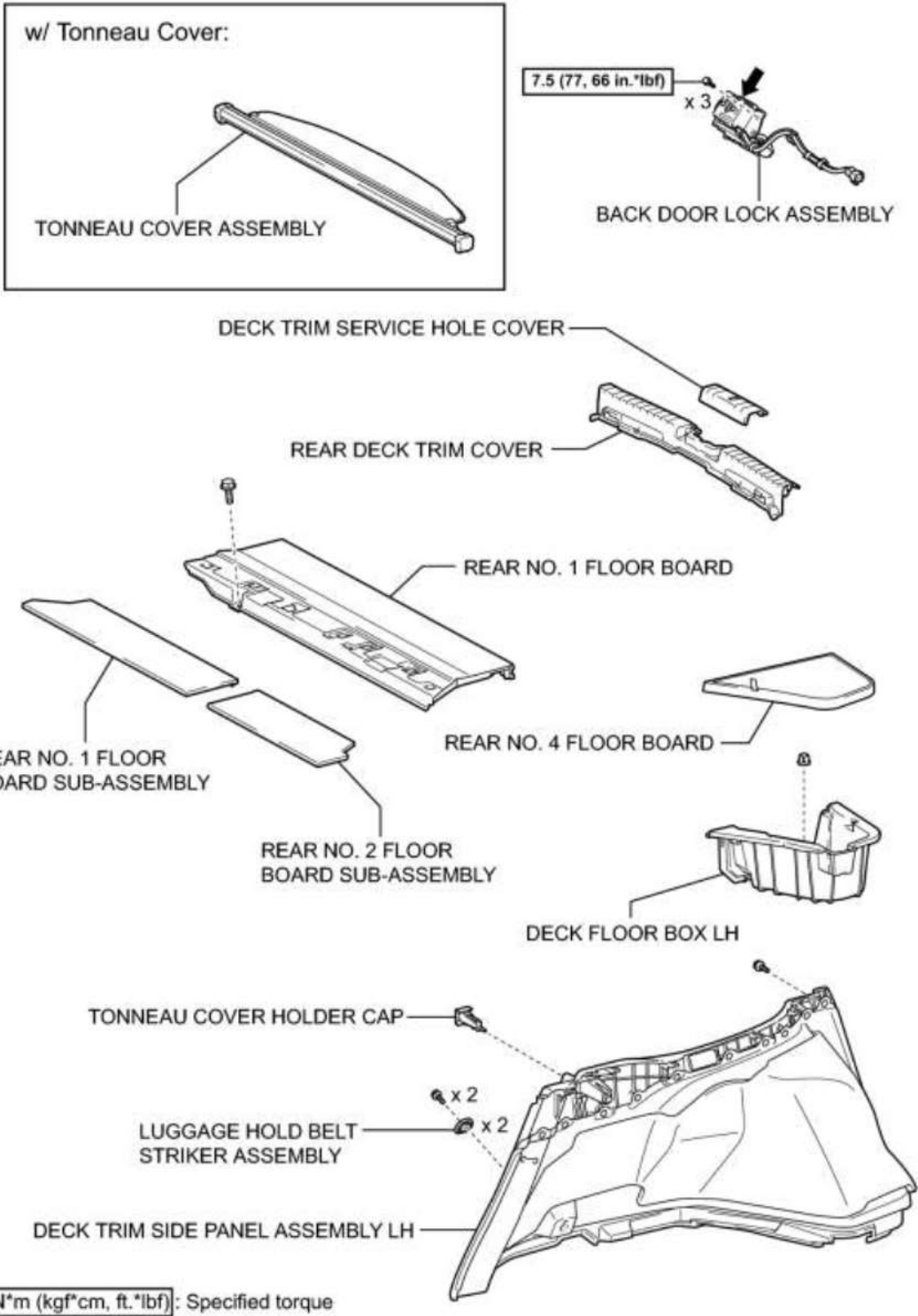
ILLUSTRATION



N*m (kgf*cm, ft.*lbf): Specified torque

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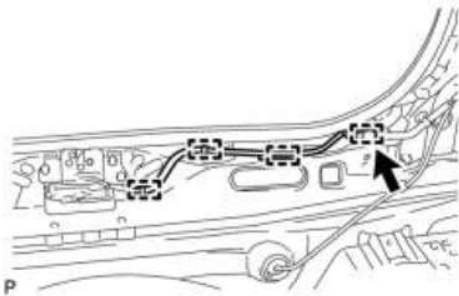
ILLUSTRATION



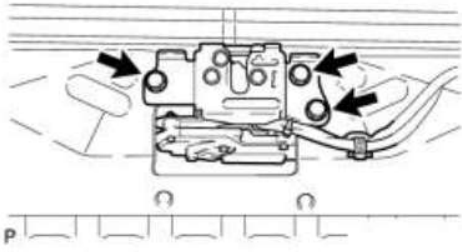
P

REMOVAL

1. REMOVE REAR NO. 2 FLOOR BOARD (for Separate Type) [INFO](#)
2. REMOVE REAR DECK FLOOR BOX [INFO](#)
3. REMOVE REAR DOOR SCUFF PLATE LH [INFO](#)
4. DISCONNECT REAR DOOR OPENING TRIM WEATHERSTRIP LH
5. REMOVE REAR SEAT CUSHION ASSEMBLY [INFO](#)
6. REMOVE REAR SIDE SEATBACK ASSEMBLY LH [INFO](#)
7. REMOVE TONNEAU COVER ASSEMBLY (w/ Tonneau Cover) [INFO](#)
8. REMOVE REAR NO. 4 FLOOR BOARD [INFO](#)
9. REMOVE DECK FLOOR BOX LH [INFO](#)
10. REMOVE REAR NO. 1 FLOOR BOARD SUB-ASSEMBLY [INFO](#)
11. REMOVE REAR NO. 2 FLOOR BOARD SUB-ASSEMBLY [INFO](#)
12. REMOVE REAR NO. 1 FLOOR BOARD [INFO](#)
13. REMOVE DECK TRIM SERVICE HOLE COVER [INFO](#)
14. REMOVE REAR DECK TRIM COVER [INFO](#)
15. REMOVE LUGGAGE HOLD BELT STRIKER ASSEMBLY [INFO](#)
16. REMOVE TONNEAU COVER HOLDER CAP [INFO](#)
17. REMOVE DECK TRIM SIDE PANEL ASSEMBLY LH [INFO](#)
18. REMOVE BACK DOOR LOCK ASSEMBLY



(a) Disconnect the connector and disengage the 4 clamps.

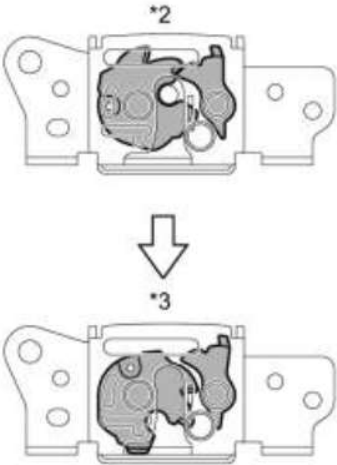


(b) Remove the 3 bolts and back door lock assembly.

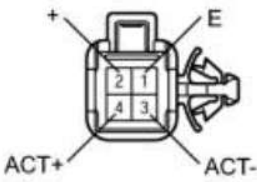
INSPECTION

1. INSPECT BACK DOOR LOCK ASSEMBLY

(a) Check the operation of the door lock motor.



(1) Move the door lock to the lock position.



(2) Apply battery voltage to the door lock motor and check the operation of the door lock motor.

OK:

Connection	Result
Battery positive (+) → 4 (ACT+)	Unlocks
Battery negative (-) → 3 (ACT-)	

If the result is not as specified, replace the back door lock assembly.

(b) Check the operation of the door courtesy switch.

(1) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
-------------------	-----------	---------------------

Tester Connection	Condition	Specified Condition
1 (E) - 2 (+)	Locked	10 kΩ or higher
1 (E) - 2 (+)	Unlocked	Below 1 Ω

Text in Illustration

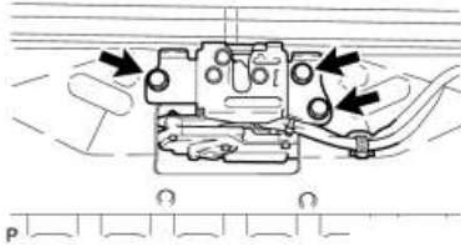
*1	Component without harness connected (Back Door Lock Assembly)
*2	Lock
*3	Unlock

If the result is not as specified, replace the back door lock assembly.

INSTALLATION

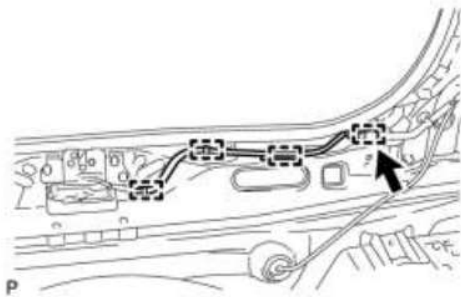
1. INSTALL BACK DOOR LOCK ASSEMBLY

(a) Apply MP grease to the sliding parts of the back door lock assembly.



(b) Install the back door lock assembly with the 3 bolts.

Torque: 7.5 N·m (77 kgf·cm, 66in·lbf)



(c) Engage the 4 clamps and connect the connector.

2. INSTALL DECK TRIM SIDE PANEL ASSEMBLY LH_ [INFO](#)

3. INSTALL TONNEAU COVER HOLDER CAP_ [INFO](#)

4. INSTALL LUGGAGE HOLD BELT STRIKER ASSEMBLY_ [INFO](#)

5. INSTALL REAR DECK TRIM COVER_ [INFO](#)

6. INSTALL DECK TRIM SERVICE HOLE COVER_ [INFO](#)

7. INSTALL REAR NO. 1 FLOOR BOARD_ [INFO](#)

8. INSTALL REAR NO. 2 FLOOR BOARD SUB-ASSEMBLY_ [INFO](#)

9. INSTALL REAR NO. 1 FLOOR BOARD SUB-ASSEMBLY_ [INFO](#)

10. INSTALL DECK FLOOR BOX LH_ [INFO](#)

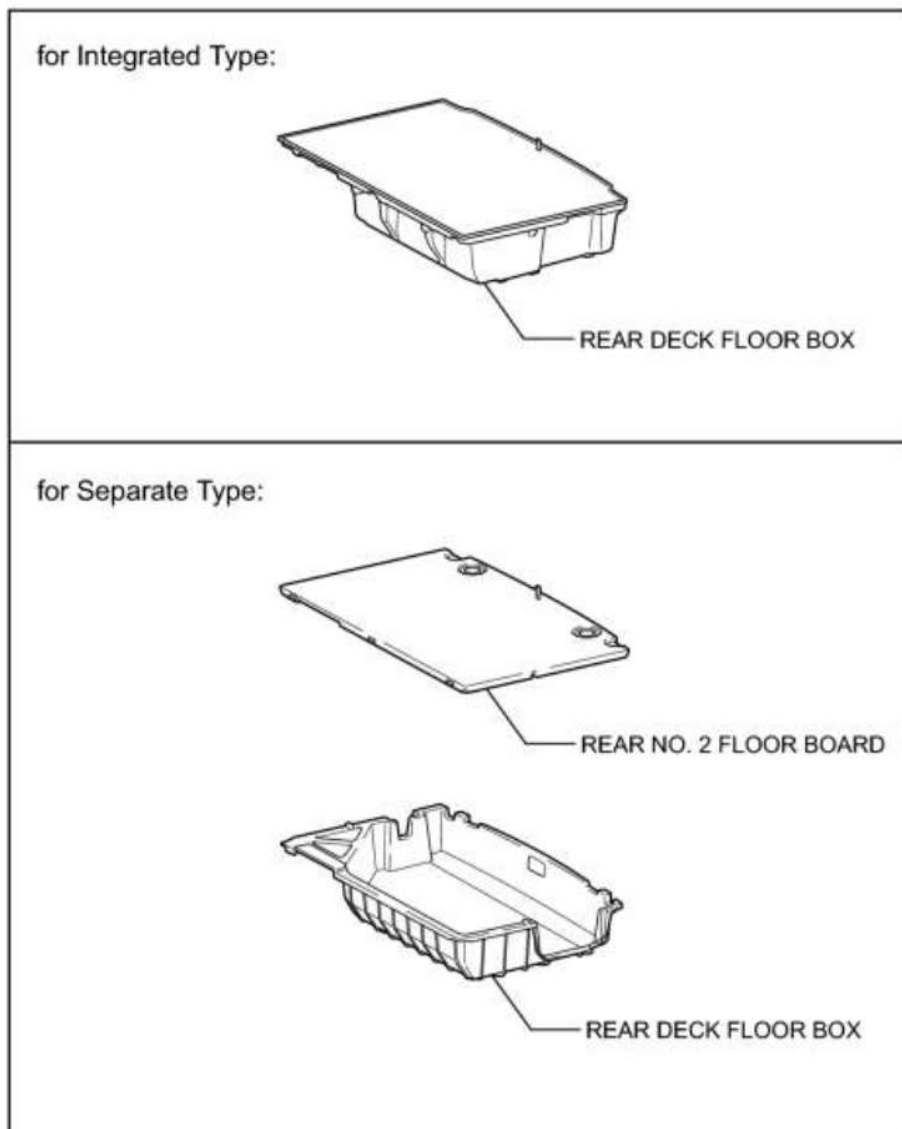
11. INSTALL REAR NO. 4 FLOOR BOARD_ [INFO](#)

12. INSTALL TONNEAU COVER ASSEMBLY (w/ Tonneau Cover)_ [INFO](#)

13. INSTALL REAR SIDE SEATBACK ASSEMBLY LH_ 
14. INSTALL REAR SEAT CUSHION ASSEMBLY_ 
15. INSTALL REAR DOOR OPENING TRIM WEATHERSTRIP LH_ 
16. INSTALL REAR DOOR SCUFF PLATE LH_ 
17. INSTALL REAR DECK FLOOR BOX_ 
18. INSTALL REAR NO. 2 FLOOR BOARD (for Separate Type)_ 

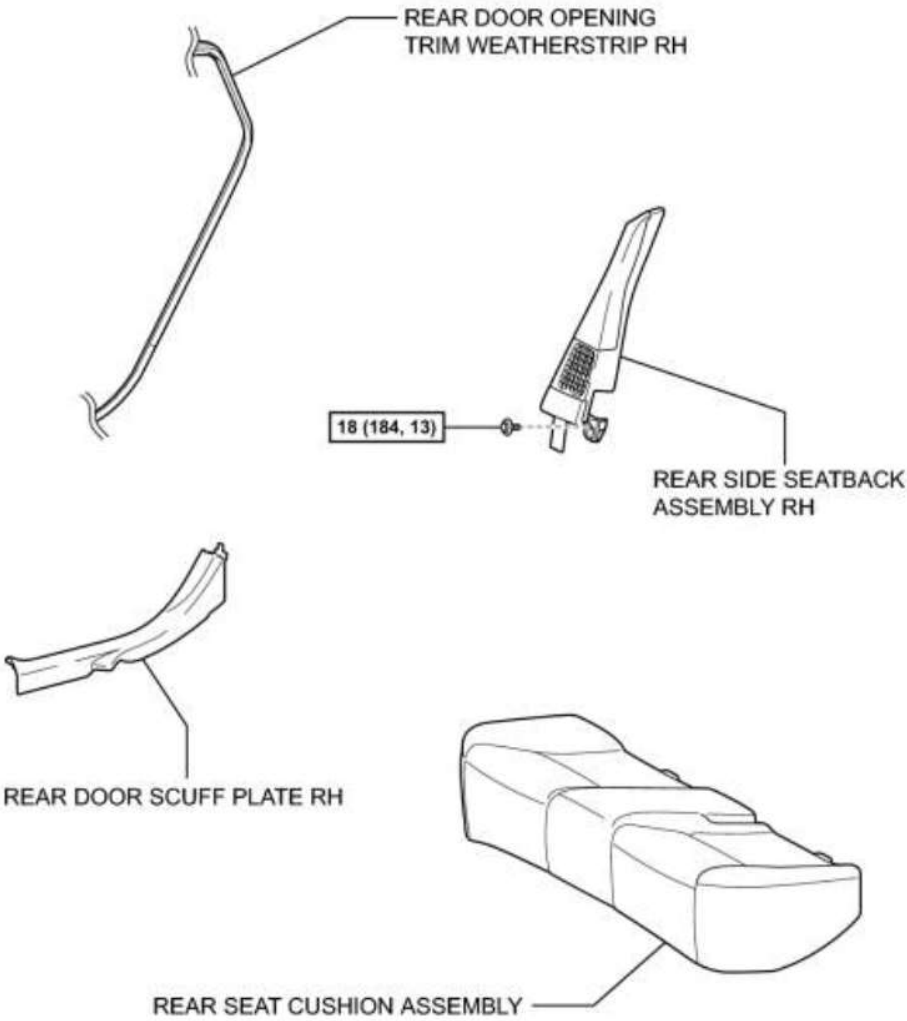
COMPONENTS

ILLUSTRATION



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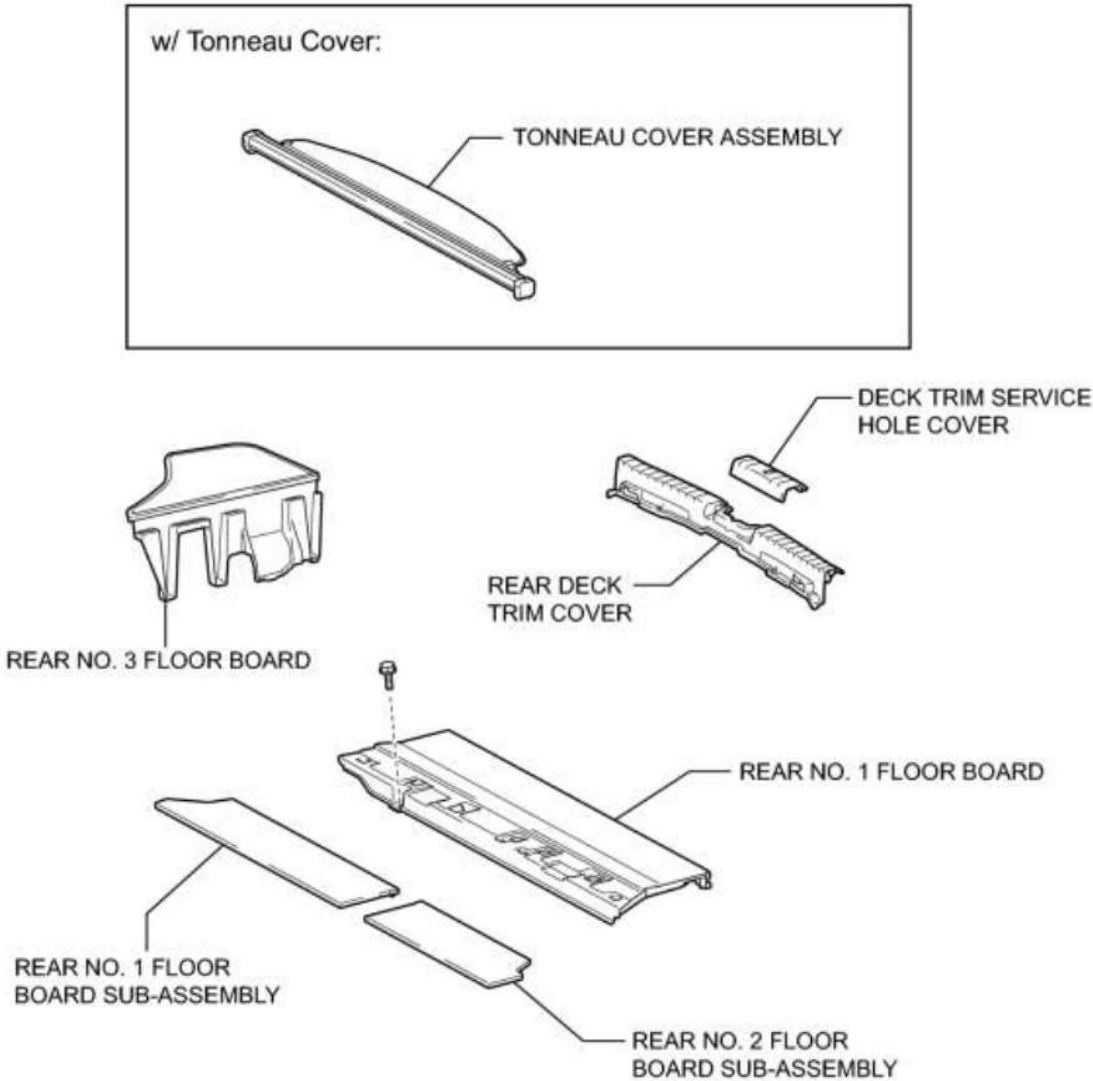
ILLUSTRATION



N*m (kgf*cm, ft.*lbf): Specified torque

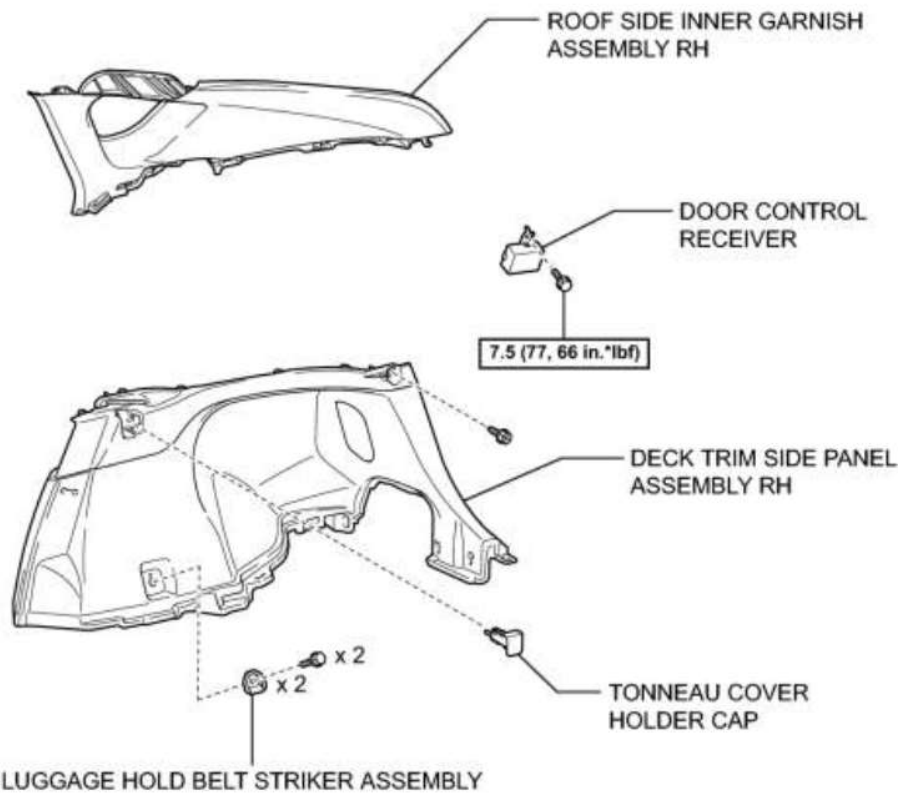
P

ILLUSTRATION



P

ILLUSTRATION



N*m (kgf*cm, ft.*lbf): Specified torque

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REMOVAL

1. REMOVE REAR NO. 2 FLOOR BOARD (for Separate Type) [INFO](#)

2. REMOVE REAR DECK FLOOR BOX [INFO](#)

3. REMOVE REAR DOOR SCUFF PLATE RH

HINT:

Use the same procedure for the RH side and LH side [INFO](#).

4. DISCONNECT REAR DOOR OPENING TRIM WEATHERSTRIP RH

5. REMOVE REAR SIDE SEATBACK ASSEMBLY RH [INFO](#)

6. REMOVE REAR SEAT CUSHION ASSEMBLY [INFO](#)

7. REMOVE TONNEAU COVER ASSEMBLY (w/ Tonneau Cover) [INFO](#)

8. REMOVE REAR NO. 3 FLOOR BOARD [INFO](#)

9. REMOVE REAR NO. 1 FLOOR BOARD SUB-ASSEMBLY [INFO](#)

10. REMOVE REAR NO. 2 FLOOR BOARD SUB-ASSEMBLY [INFO](#)

11. REMOVE REAR NO. 1 FLOOR BOARD [INFO](#)

12. REMOVE DECK TRIM SERVICE HOLE COVER [INFO](#)

13. REMOVE REAR DECK TRIM COVER [INFO](#)

14. REMOVE LUGGAGE HOLD BELT STRIKER ASSEMBLY

HINT:

Use the same procedure for the RH side and LH side [INFO](#).

15. REMOVE TONNEAU COVER HOLDER CAP

HINT:

Use the same procedure for the RH side and LH side [INFO](#).

16. REMOVE DECK TRIM SIDE PANEL ASSEMBLY RH [INFO](#)

17. REMOVE ROOF SIDE INNER GARNISH ASSEMBLY RH

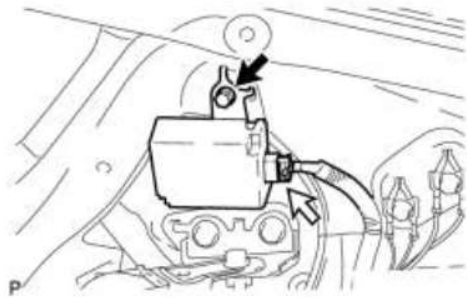
HINT:

2010 Toyota Prius

Repair Manual

Use the same procedure for the RH side and LH side INFO.

18. REMOVE DOOR CONTROL RECEIVER

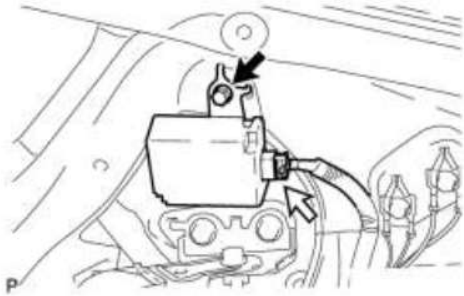


(a) Disconnect the connector.

(b) Remove the bolt and door control receiver.

INSTALLATION

1. INSTALL DOOR CONTROL RECEIVER



(a) Install the door control receiver with the bolt.

Torque: 7.5 N·m (77 kgf·cm, 66in·lbf)

(b) Connect the connector.

2. INSTALL ROOF SIDE INNER GARNISH ASSEMBLY RH

HINT:

Use the same procedure for the RH side and LH side [INFO](#).

3. INSTALL DECK TRIM SIDE PANEL ASSEMBLY RH_ [INFO](#)

4. INSTALL TONNEAU COVER HOLDER CAP

HINT:

Use the same procedure for the RH side and LH side [INFO](#).

5. INSTALL LUGGAGE HOLD BELT STRIKER ASSEMBLY

HINT:

Use the same procedure for the RH side and LH side [INFO](#).

6. INSTALL REAR DECK TRIM COVER_ [INFO](#)

7. INSTALL DECK TRIM SERVICE HOLE COVER_ [INFO](#)

8. INSTALL REAR NO. 1 FLOOR BOARD_ [INFO](#)

9. INSTALL REAR NO. 2 FLOOR BOARD SUB-ASSEMBLY_ [INFO](#)

10. INSTALL REAR NO. 1 FLOOR BOARD SUB-ASSEMBLY_ [INFO](#)

11. INSTALL REAR NO. 3 FLOOR BOARD_ [INFO](#)

12. INSTALL TONNEAU COVER ASSEMBLY (w/ Tonneau Cover)_ [INFO](#)

13. INSTALL REAR SEAT CUSHION ASSEMBLY_ [INFO](#)

14. INSTALL REAR SIDE SEATBACK ASSEMBLY RH_ [INFO](#)

15. INSTALL REAR DOOR OPENING TRIM WEATHERSTRIP RH_ [INFO](#)

16. INSTALL REAR DOOR SCUFF PLATE RH

HINT:

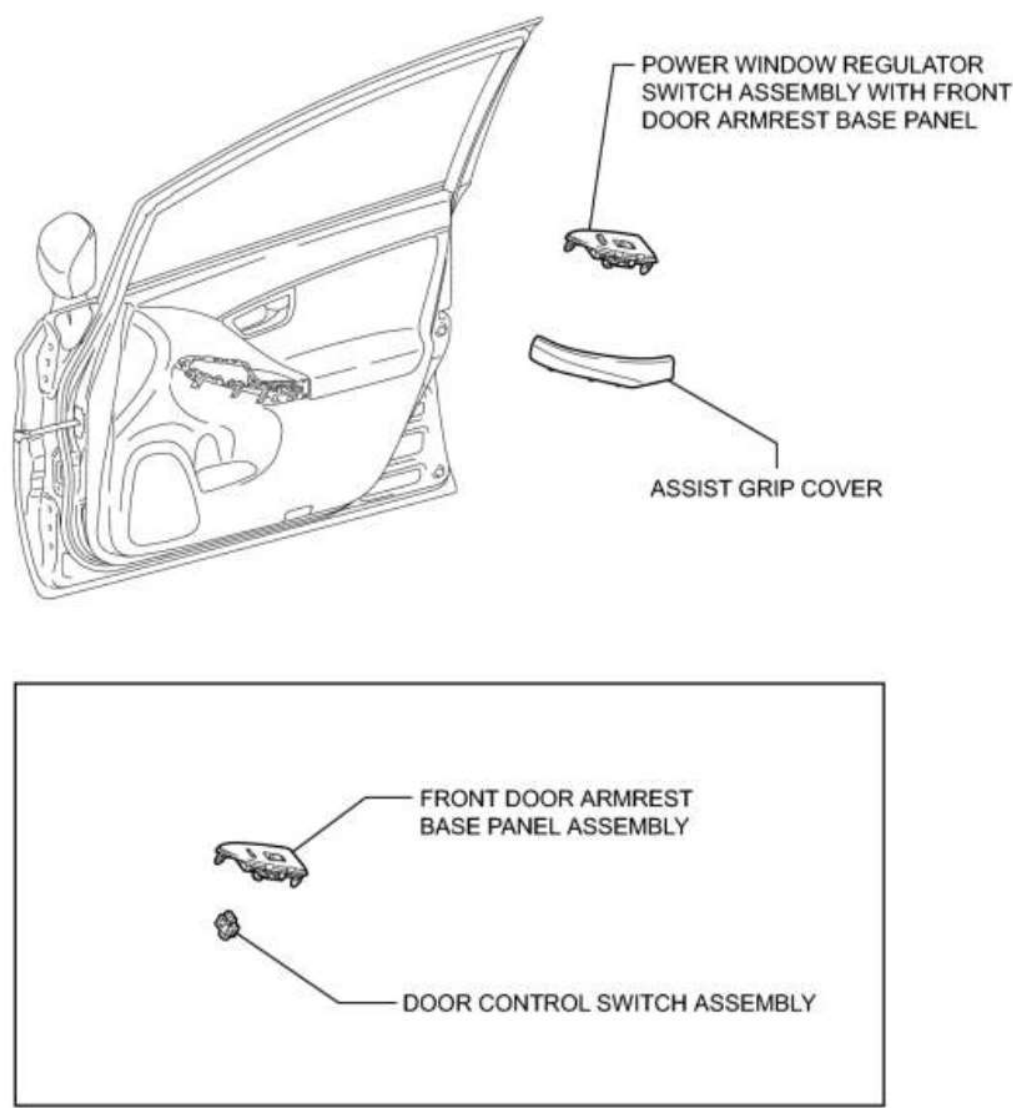
Use the same procedure for the RH side and LH side [INFO](#).

17. INSTALL REAR DECK FLOOR BOX_ [INFO](#)

18. INSTALL REAR NO. 2 FLOOR BOARD (for Separate Type)_ [INFO](#)

COMPONENTS

ILLUSTRATION



P

REMOVAL

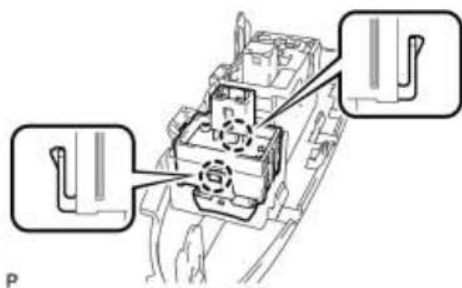
1. REMOVE ASSIST GRIP COVER

HINT:

Use the same procedure for the RH side and LH side INFO.

2. REMOVE POWER WINDOW REGULATOR SWITCH ASSEMBLY WITH FRONT DOOR ARMREST BASE PANEL INFO

3. REMOVE DOOR CONTROL SWITCH ASSEMBLY



(a) Disengage the 2 claws and remove the door control switch assembly.

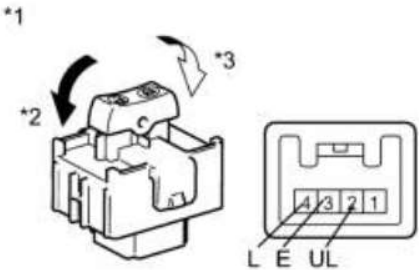
INSPECTION

1. INSPECT DOOR CONTROL SWITCH ASSEMBLY

(a) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
4 (L) - 3 (E)	Locked	Below 1 Ω
4 (L) - 3 (E)	off	10 kΩ or higher
2 (UL) - 3 (E)	Unlocked	Below 1 Ω
2 (UL) - 3 (E)	off	10 kΩ or higher



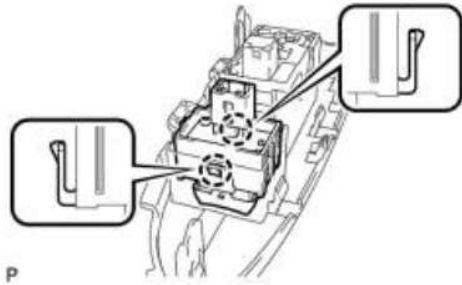
Text in Illustration

*1	Component without harness connected (Door Control Switch Assembly)
*2	Unlock
*3	Lock

If the result is not as specified, replace the door control switch assembly.

INSTALLATION

1. INSTALL DOOR CONTROL SWITCH ASSEMBLY



(a) Engage the 2 claws to install the door control switch assembly.

2. INSTALL POWER WINDOW REGULATOR SWITCH ASSEMBLY WITH FRONT DOOR ARMREST BASE PANEL INFO

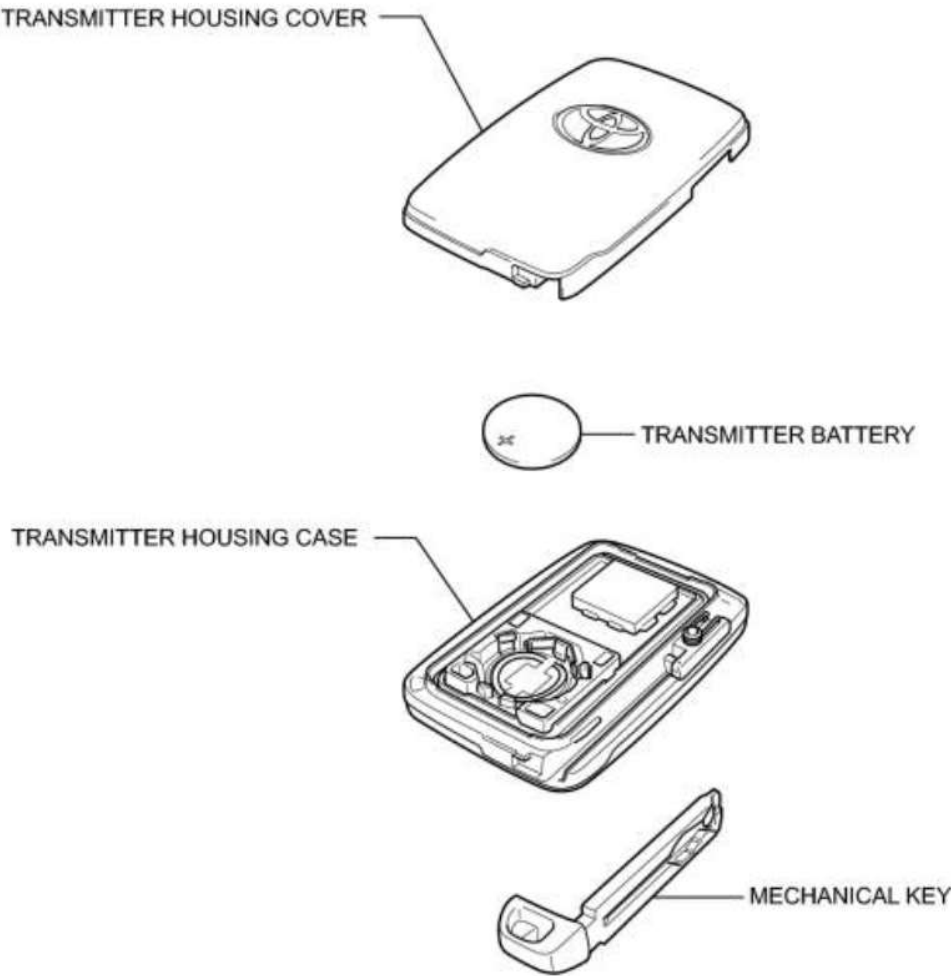
3. INSTALL ASSIST GRIP COVER

HINT:

Use the same procedure for the RH side and LH side INFO.

COMPONENTS

ILLUSTRATION



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REMOVAL

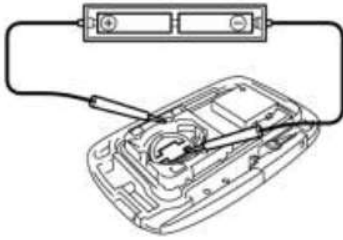
1. REMOVE TRANSMITTER BATTERY

INSPECTION

1. INSPECT ELECTRICAL KEY TRANSMITTER

(a) Inspect operation of the transmitter.

(1) Remove the battery (lithium battery) from the transmitter INFO.



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(2) Install a new or normal battery (lithium battery).

HINT:

If a new or normal battery is not available, first connect 2 new 1.5 V batteries in series. Then connect leads to the batteries and apply 3 V to the transmitter, as shown in the illustration.

(3) From outside the vehicle, approximately 1 m (3.28 ft.) away from the driver side outside door handle, test the transmitter by pointing its key plate at the vehicle and pressing a transmitter switch.

OK:

The door lock can be operated via the transmitter.

The LED comes on more than once.

- The operational area differs depending on the user, the way the transmitter is held, and the location.
- The transmitter's faint electric waves may be affected if the area has strong electric waves or noise. The transmitter's operation area may be shortened or the transmitter may not function.

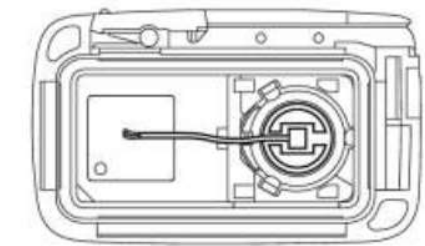
(b) Inspect the battery capacity.

(1) Remove the battery INFO from the electrical key transmitter that does not operate. Attach a lead wire (0.6 mm (0.0236 in.) in diameter or less including wire sheath) with tape or equivalent to the negative terminal.

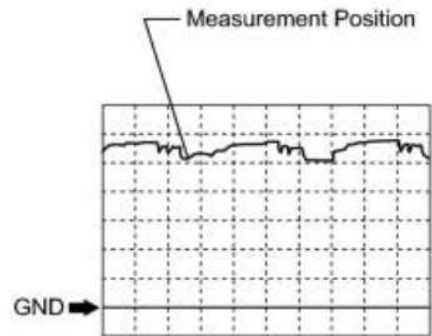
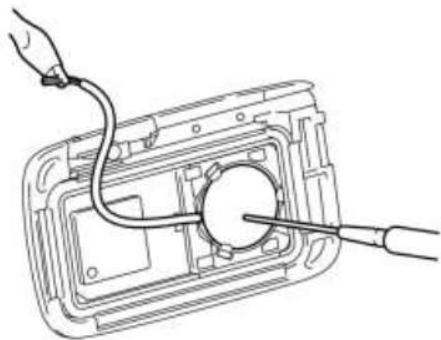
NOTICE:

Do not wrap the lead wire around a terminal, wedge it between the terminals, or solder it. A terminal may be deformed or damaged, and the battery will not be able to be installed correctly.

(2) Carefully pull the lead wire out from the position shown in the illustration and install the previously removed transmitter battery.



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(3) Using an oscilloscope, check the transmitter battery voltage waveform.

HINT:

When measuring the battery voltage, while operating the lock sensor of a door handle, bring the electrical key transmitter within the entry operating range to perform the measurement. For the entry operating range, refer to **SYSTEM DESCRIPTION** [INFO](#).

Standard voltage:

Item	Content
Tester Connection	Battery positive (+) - Battery negative (-)
Tool Setting	0.5 V/DIV., 100 ms/DIV.
Condition	Power switch OFF, all doors closed and lock sensor touched
Specified Condition	2.2 to 3.2 V (Refer to the waveform)

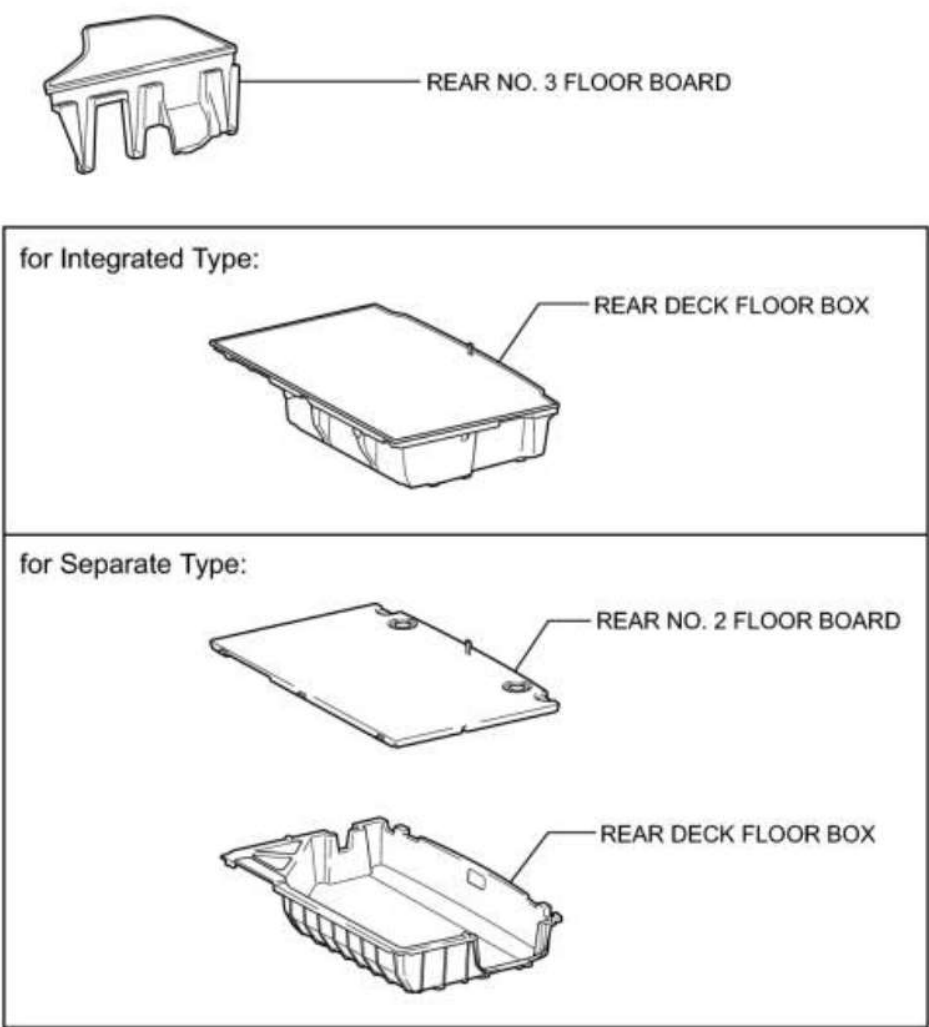
If the result is not as specified, replace the transmitter battery.

INSTALLATION

1. INSTALL TRANSMITTER BATTERY

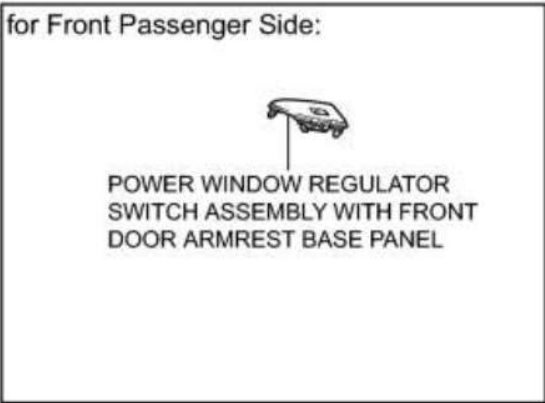
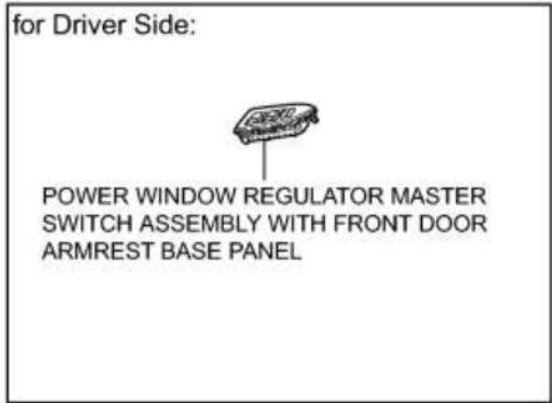
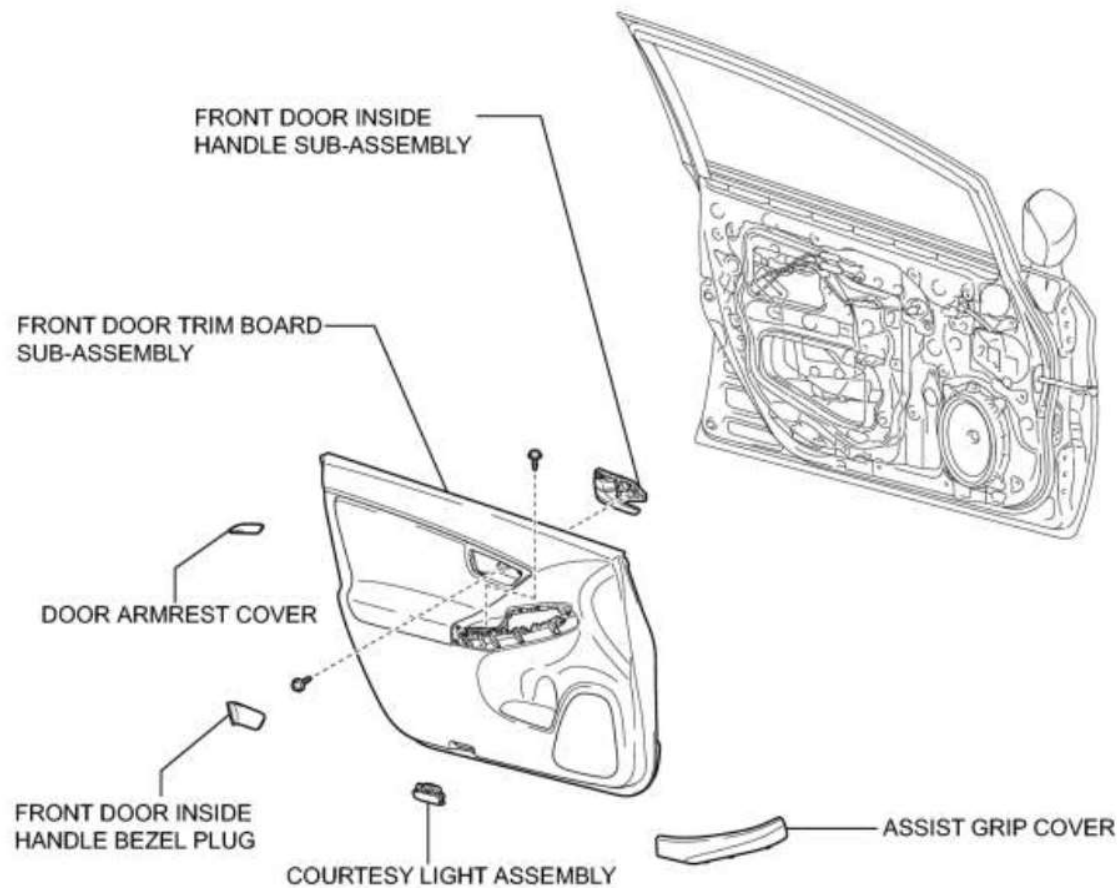
COMPONENTS

ILLUSTRATION



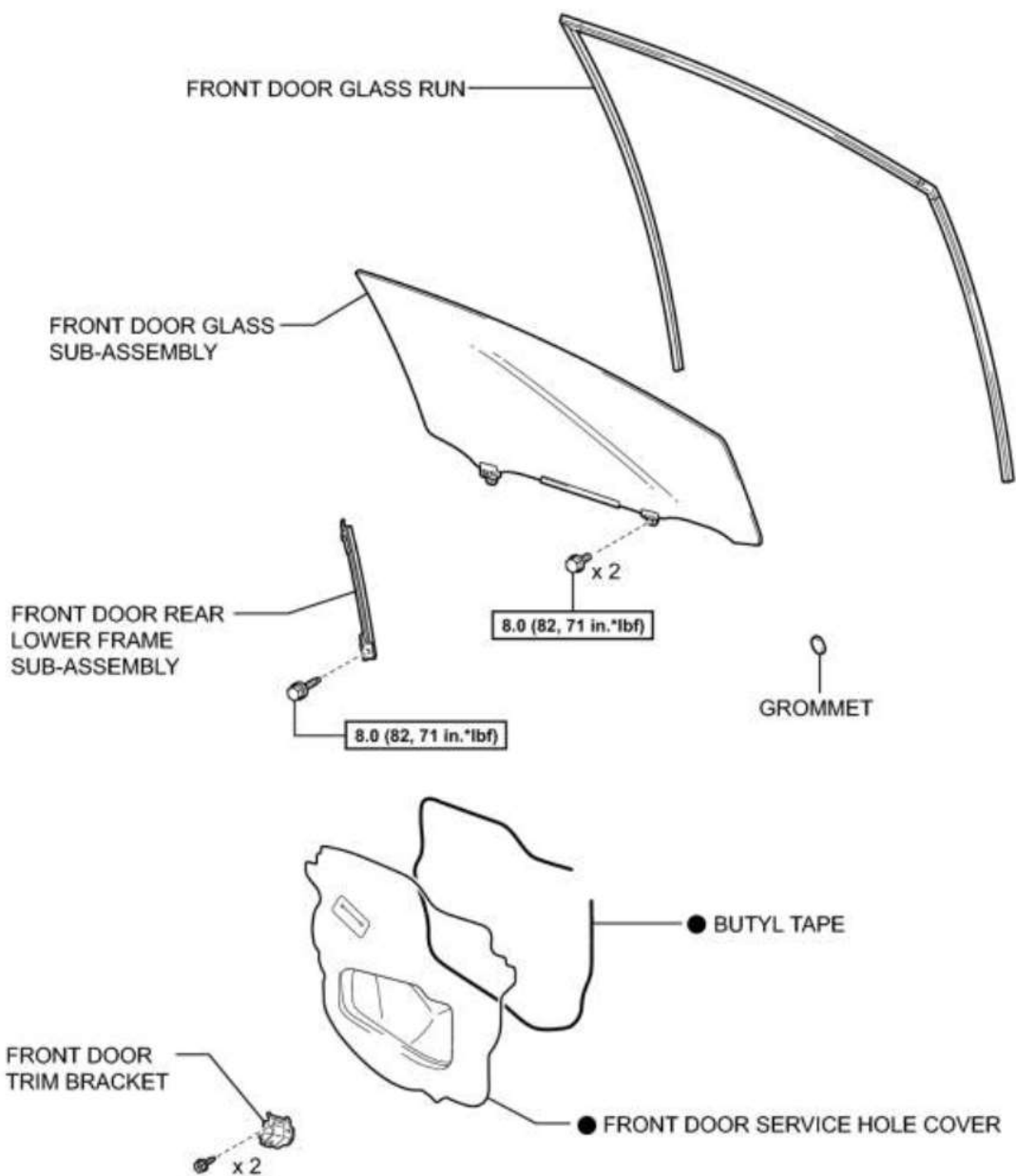
P

ILLUSTRATION



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ILLUSTRATION

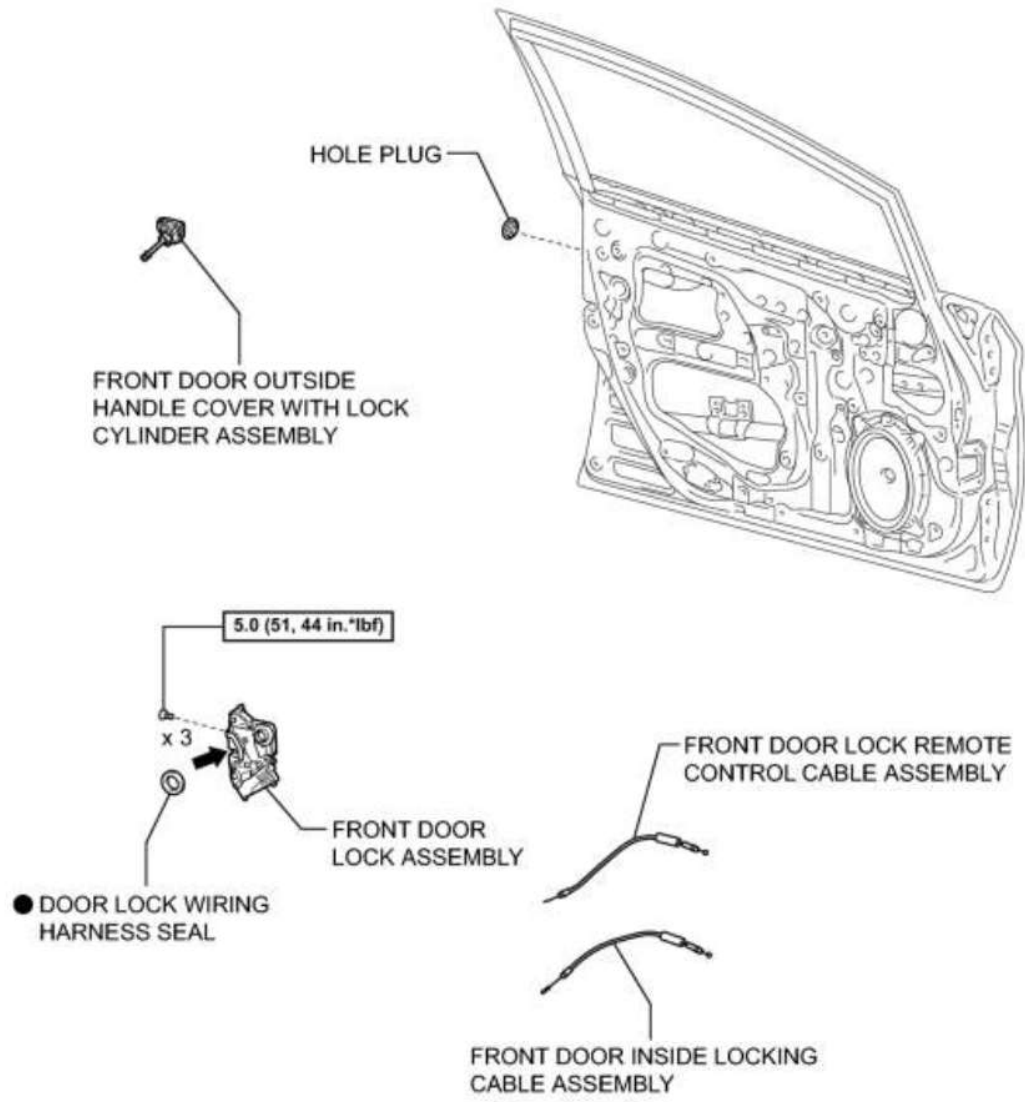


[N*m (kgf*cm, ft.*lbf)]: Specified torque

● Non-reusable part

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ILLUSTRATION

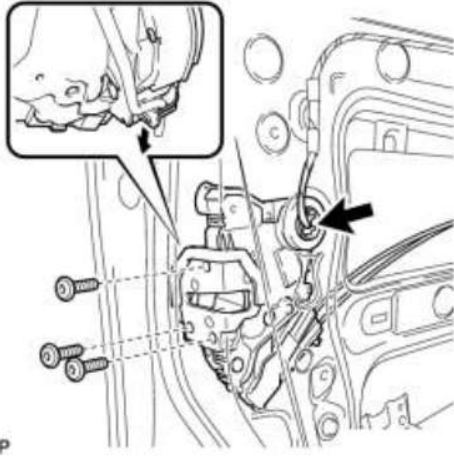


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REMOVAL

1. REMOVE REAR NO. 2 FLOOR BOARD (for Separate Type) [INFO](#)
2. REMOVE REAR DECK FLOOR BOX [INFO](#)
3. REMOVE REAR NO. 3 FLOOR BOARD [INFO](#)
4. REMOVE FRONT DOOR INSIDE HANDLE BEZEL PLUG [INFO](#)
5. REMOVE ASSIST GRIP COVER [INFO](#)
6. REMOVE POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY WITH FRONT DOOR ARMREST BASE PANEL (for Driver Side) [INFO](#)
7. REMOVE POWER WINDOW REGULATOR SWITCH ASSEMBLY WITH FRONT DOOR ARMREST BASE PANEL (for Front Passenger Side) [INFO](#)
8. REMOVE DOOR ARMREST COVER [INFO](#)
9. REMOVE COURTESY LIGHT ASSEMBLY [INFO](#)
10. REMOVE FRONT DOOR TRIM BOARD SUB-ASSEMBLY [INFO](#)
11. REMOVE FRONT DOOR INSIDE HANDLE SUB-ASSEMBLY [INFO](#)
12. REMOVE FRONT DOOR TRIM BRACKET [INFO](#)
13. REMOVE FRONT DOOR SERVICE HOLE COVER [INFO](#)
14. REMOVE FRONT DOOR GLASS SUB-ASSEMBLY [INFO](#)
15. REMOVE FRONT DOOR GLASS RUN [INFO](#)
16. REMOVE FRONT DOOR REAR LOWER FRAME SUB-ASSEMBLY [INFO](#)
17. REMOVE FRONT DOOR OUTSIDE HANDLE COVER WITH LOCK CYLINDER ASSEMBLY (for Driver Side) [INFO](#)
18. REMOVE FRONT DOOR LOCK ASSEMBLY

(a) Disconnect the connector.



(b) Using a T30 "TORX" socket wrench, remove the 3 screws.

(c) Slide the front door lock assembly downward, and remove the front door lock assembly and cables as a unit.



(d) Remove the door lock wiring harness seal from the front door lock assembly.

19. REMOVE FRONT DOOR LOCK REMOTE CONTROL CABLE ASSEMBLY [INFO](#)

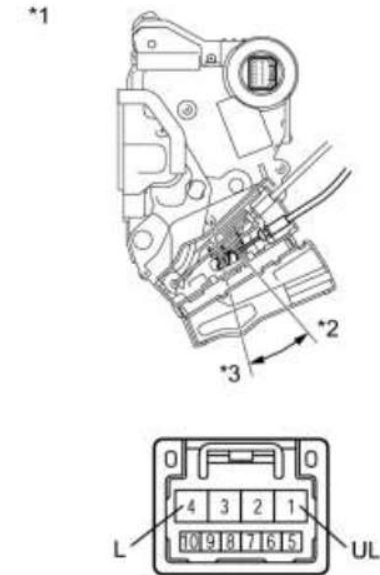
20. REMOVE FRONT DOOR INSIDE LOCKING CABLE ASSEMBLY [INFO](#)

INSPECTION

1. INSPECT FRONT DOOR LOCK ASSEMBLY LH

- (a) Check the operation of the door lock motor.
- (1) Apply battery voltage and check the operation of the door lock motor.

OK:



Connection	Result
Battery positive (+) → Terminal 4 (L)	Locks
Battery negative (-) → Terminal 1 (UL)	
Battery positive (+) → Terminal 1 (UL)	Unlocks
Battery negative (-) → Terminal 4 (L)	

Text in Illustration

*1	Component without harness connected (Front Door Lock Assembly LH)
*2	Unlock
*3	Lock

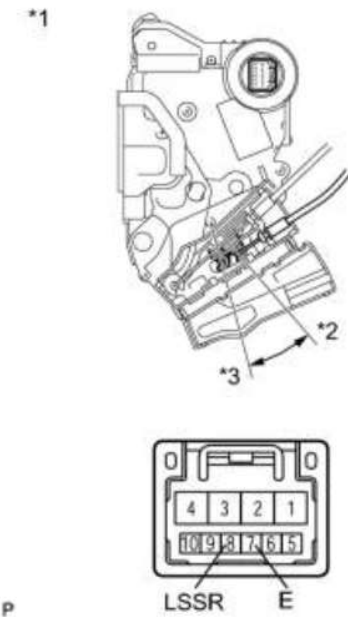
If the result is not as specified, replace the front door lock assembly LH.

(b) Check the operation of the door unlock detection switch.

- (1) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
7 (E) - 8 (LSSR)	Locked	10 kΩ or higher
7 (E) - 8 (LSSR)	Unlocked	Below 1 Ω



Text in Illustration

*1	Component without harness connected (Front Door Lock Assembly LH)
*2	Unlock
*3	Lock

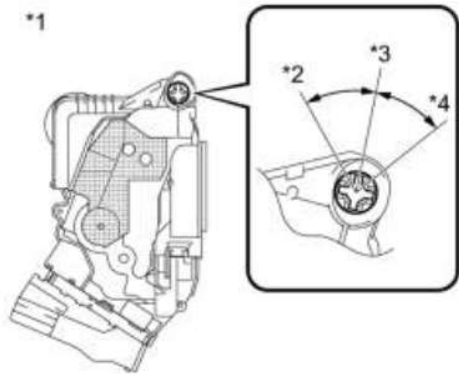
If the result is not as specified, replace the front door lock assembly LH.

(c) Check the operation of the door key lock and unlock switch.

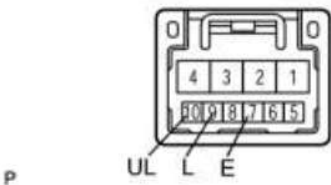
(1) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
7 (E) - 9 (L)	Locked	Below 1 Ω
7 (E) - 9 (L)	off	10 kΩ or higher
7 (E) - 10 (UL)	Unlocked	Below 1 Ω
7 (E) - 10 (UL)	off	10 kΩ or higher



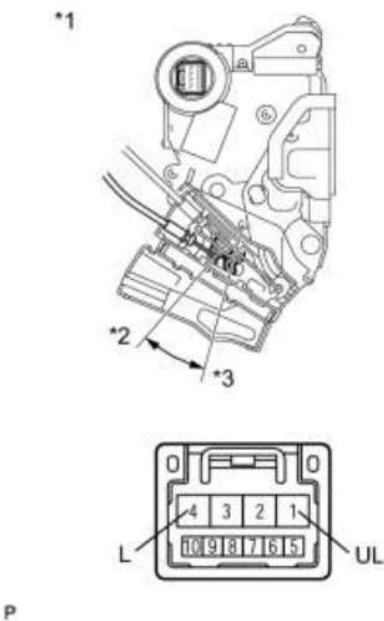
Text in Illustration



*1	Component without harness connected (Front Door Lock Assembly LH)
*2	Lock
*3	off
*4	Unlock

If the result is not as specified, replace the front door lock assembly LH.

2. INSPECT FRONT DOOR LOCK ASSEMBLY RH



(a) Check the operation of the door lock motor.

(1) Apply battery voltage and check the operation of the door lock motor.

OK:

Connection	Result
Battery positive (+) → Terminal 4 (L)	Locks
Battery negative (-) → Terminal 1 (UL)	
Battery positive (+) → Terminal 1 (UL)	Unlocks
Battery negative (-) → Terminal 4 (L)	

Text in Illustration

*1	Component without harness connected (Front Door Lock Assembly RH)
*2	Unlock
*3	Lock

If the result is not as specified, replace the front door lock assembly RH.

(b) Check the operation of the door unlock detection switch.

(1) Measure the resistance according to the value(s) in the table below.

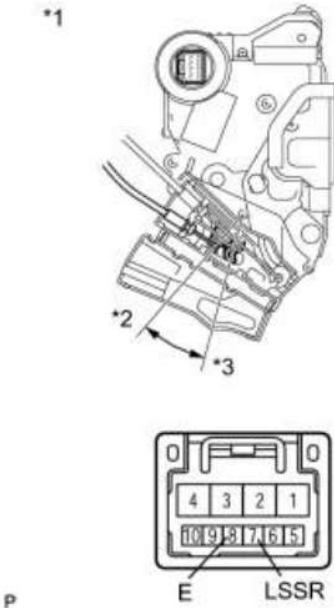
Standard Resistance:

Tester Connection	Condition	Specified Condition
7 (LSSR) - 8 (E)	Locked	10 kΩ or higher
7 (LSSR) - 8 (E)	Unlocked	Below 1 Ω

Text in Illustration

*1	Component without harness connected (Front Door Lock Assembly RH)
*2	Unlock
*3	Lock

If the result is not as specified, replace the front door lock assembly RH.



INSTALLATION

1. INSTALL FRONT DOOR INSIDE LOCKING CABLE ASSEMBLY INFO

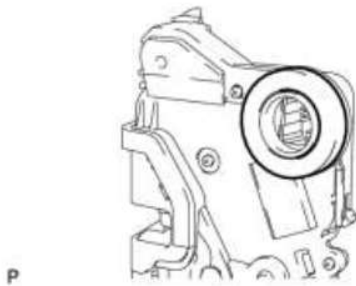
2. INSTALL FRONT DOOR LOCK REMOTE CONTROL CABLE ASSEMBLY INFO

3. INSTALL FRONT DOOR LOCK ASSEMBLY

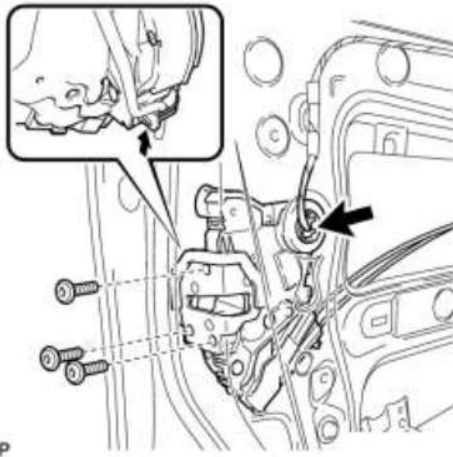
NOTICE:

- When reusing the removed front door lock assembly, replace the door lock wiring harness seal on the connector with a new one.
- Do not allow grease or dust to adhere to the door lock wiring harness seal surface of the connector.
- Reusing the door lock wiring harness seal or using a damaged door lock wiring harness seal may cause water intrusion. This may result in a malfunction of the front door lock assembly.

(a) Apply MP grease to the sliding parts of the front door lock assembly.



(b) Install a new door lock wiring harness seal to the front door lock assembly.



(c) Insert the front door lock open rod to the front door lock assembly.

(d) Make sure that the front door lock open rod is securely connected to the front door lock assembly.

(e) Using a T30 "TORX" socket wrench, install the front door lock assembly with the 3 screws.

Torque: **5.0 N·m (51 kgf·cm, 44in·lbf)**

4. INSTALL FRONT DOOR OUTSIDE HANDLE COVER WITH LOCK CYLINDER ASSEMBLY (for Driver Side) INFO

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5. INSTALL FRONT DOOR REAR LOWER FRAME SUB-ASSEMBLY_ [INFO](#)
6. INSTALL FRONT DOOR GLASS RUN_ [INFO](#)
7. INSTALL FRONT DOOR GLASS SUB-ASSEMBLY_ [INFO](#)
8. INSTALL FRONT DOOR SERVICE HOLE COVER_ [INFO](#)
9. INSTALL FRONT DOOR TRIM BRACKET_ [INFO](#)
10. INSTALL FRONT DOOR INSIDE HANDLE SUB-ASSEMBLY_ [INFO](#)
11. INSTALL FRONT DOOR TRIM BOARD SUB-ASSEMBLY_ [INFO](#)
12. INSTALL COURTESY LIGHT ASSEMBLY_ [INFO](#)
13. INSTALL DOOR ARMREST COVER_ [INFO](#)
14. INSTALL POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY WITH FRONT DOOR ARMREST BASE PANEL (for Driver Side)_ [INFO](#)
15. INSTALL POWER WINDOW REGULATOR SWITCH ASSEMBLY WITH FRONT DOOR ARMREST BASE PANEL (for Front Passenger Side)_ [INFO](#)
16. INSTALL ASSIST GRIP COVER_ [INFO](#)
17. INSTALL FRONT DOOR INSIDE HANDLE BEZEL PLUG_ [INFO](#)
18. INSTALL REAR NO. 3 FLOOR BOARD_ [INFO](#)
19. INSTALL REAR DECK FLOOR BOX_ [INFO](#)
20. INSTALL REAR NO. 2 FLOOR BOARD (for Separate Type)_ [INFO](#)
21. INITIALIZE POWER WINDOW CONTROL SYSTEM
[INFO](#)
22. CHECK POWER WINDOW CONTROL SYSTEM
[INFO](#)

PRECAUTION

NOTICE:

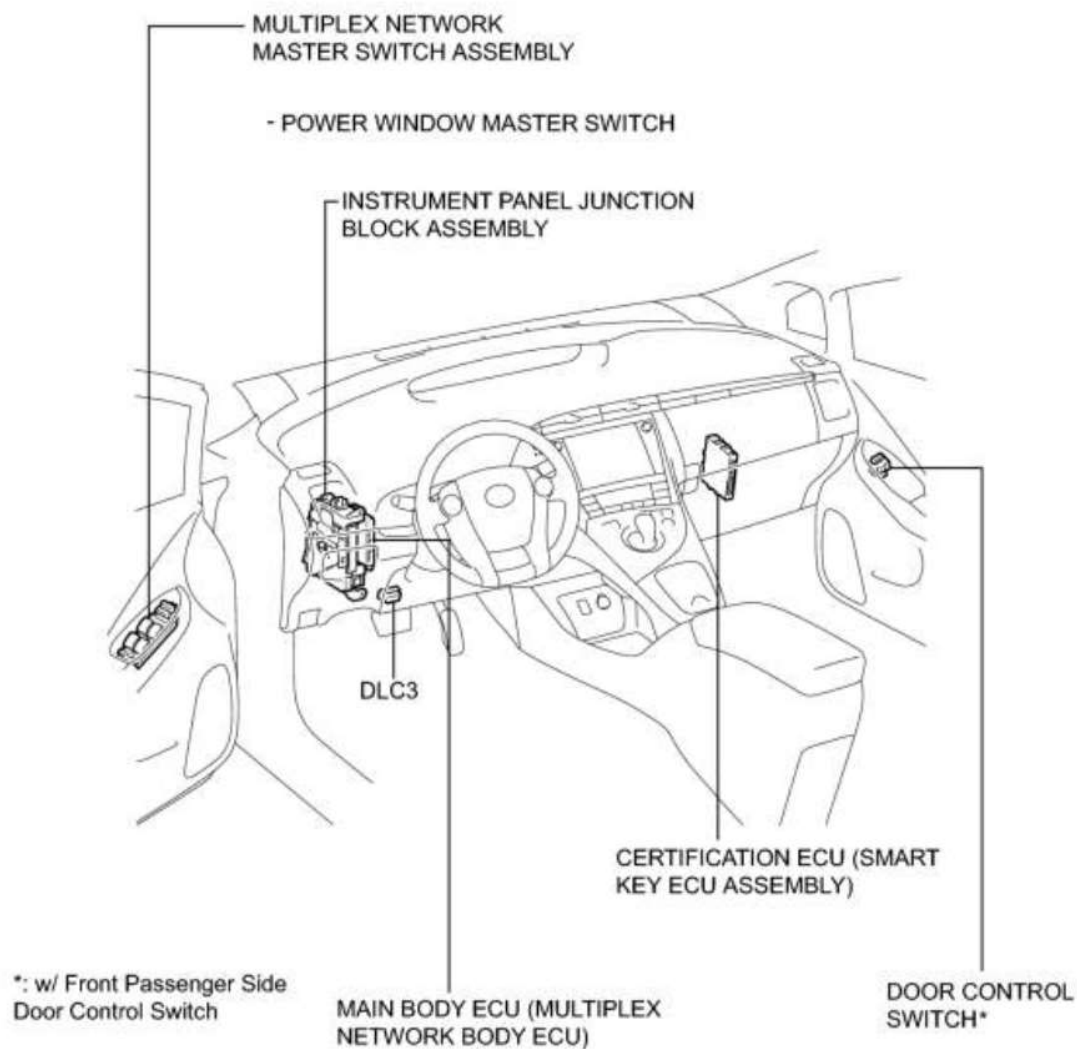
When disconnecting the cable from the negative (-) battery terminal, initialize the following system after the cable is reconnected.

System Name	See Procedure
Advanced Parking Guidance System	INFO

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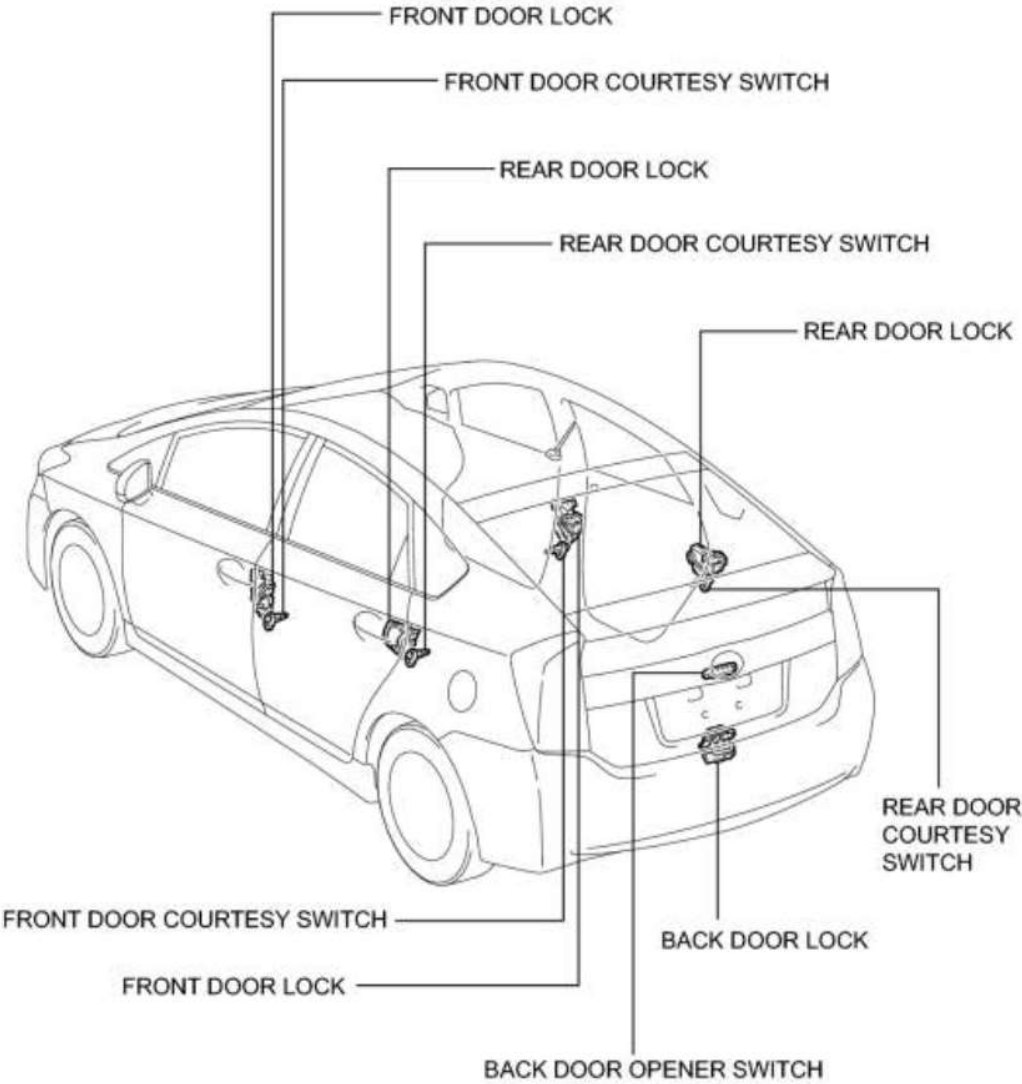
PARTS LOCATION

ILLUSTRATION



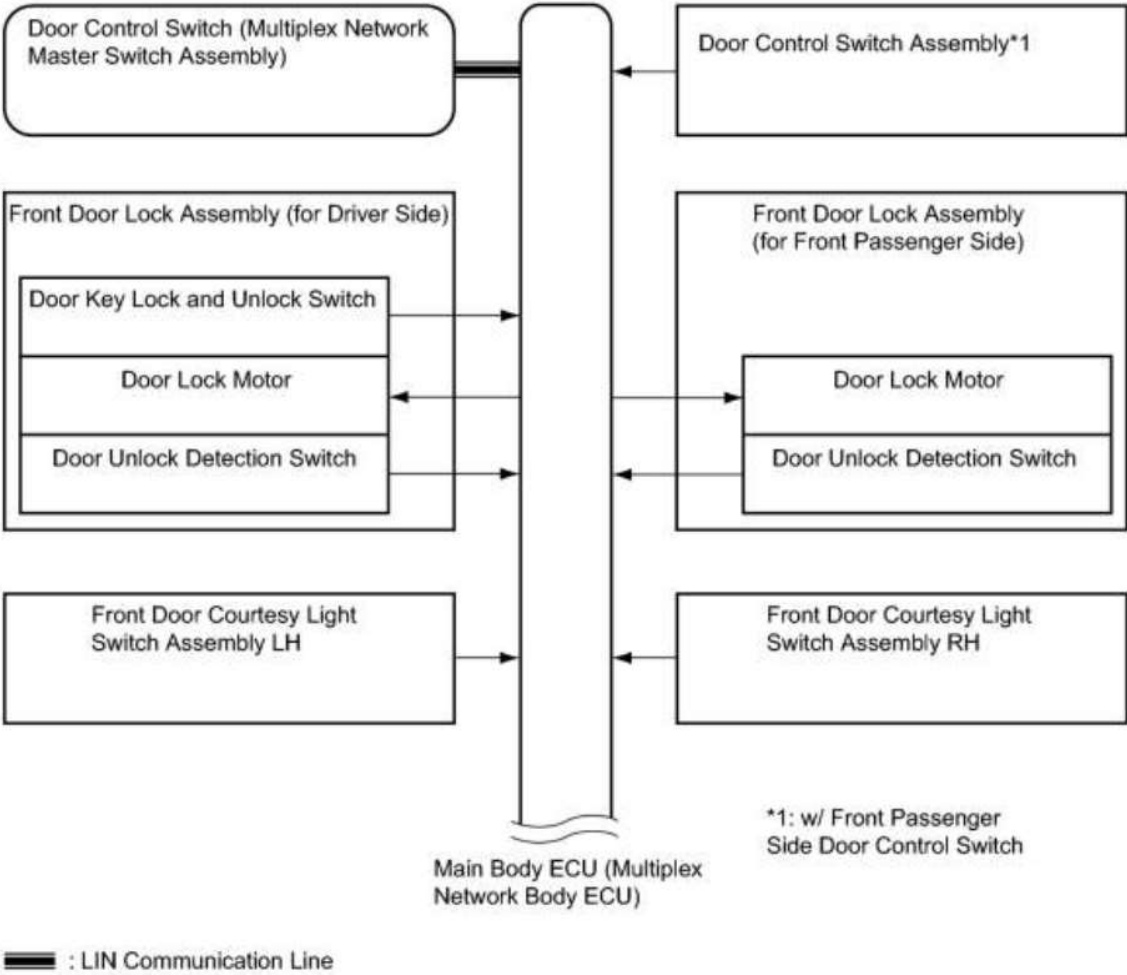
P

ILLUSTRATION

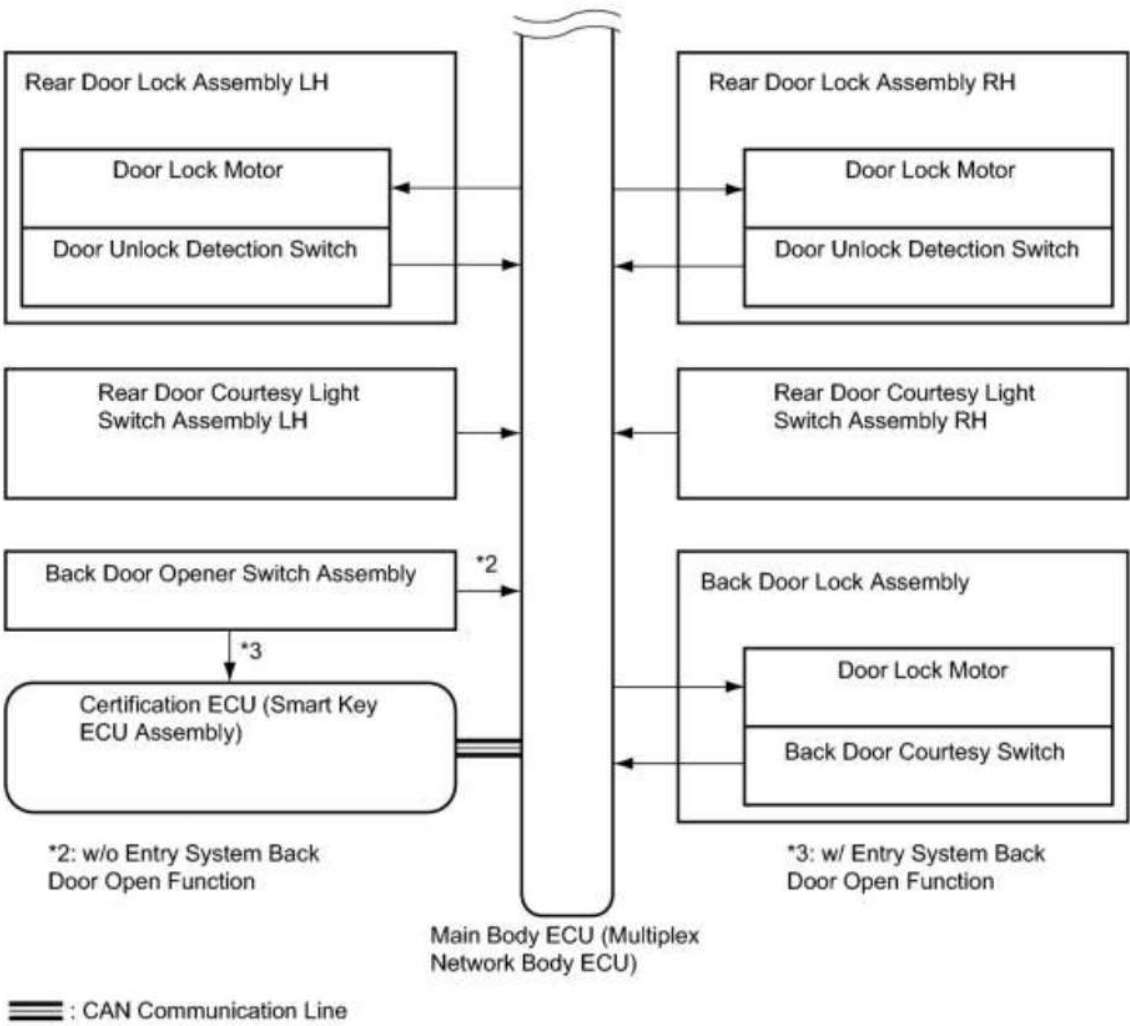


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SYSTEM DIAGRAM



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Communication Table

Sender	Receiver	Signal	Communication Method
Multiplex Network Master Switch Assembly	Main Body ECU (Multiplex Network Body ECU)	Driver door control switch signal	LIN
Certification ECU (Smart Key ECU Assembly)*3	Main Body ECU (Multiplex Network Body ECU)	Back door opener switch signal	CAN

- *3: w/ Entry System Back Door Open Function

SYSTEM DESCRIPTION

1. POWER DOOR LOCK CONTROL SYSTEM DESCRIPTION

(a) The power door lock system locks/unlocks all doors.

The driver and front passenger door control switches send lock/unlock request signals to the main body ECU (multiplex network body ECU). Then, the main body ECU (multiplex network body ECU) sends these request signals to the door lock motors in each door to lock/unlock all doors at once in response to the inputs.

Operating the driver door lock using a mechanical key sends request signals to lock or unlock the doors to the main body ECU (multiplex network body ECU).

2. FUNCTION OF MAIN COMPONENTS

Component	Function
Multiplex network master switch assembly	Driver door control switch on multiplex network master switch assembly locks or unlocks all doors.
Door control switch assembly*1	Front passenger door control switch assembly locks or unlocks all doors.
Door courtesy light switch assembly	- Placed on each door. - Detects door status (open or closed) and outputs data to main body ECU (multiplex network body ECU). - Turns on when door is opened and turns off when door is closed.
Front door lock assembly (for driver side)	- Built-in motor locks or unlocks door. - Built-in door control switch (key-linked) detects door key operation status (locked or unlocked) and outputs a signal to main body ECU (multiplex network body ECU). - Built-in position switch detects door status (locked or unlocked) and outputs a signal to main body ECU (multiplex network body ECU). This switch turns off when door is locked and turns on when door is unlocked.
Front door lock assembly (for front passenger side) Rear door lock assembly LH/RH	- Built-in motor locks or unlocks door. - Built-in position switch detects door status (locked or unlocked) and outputs a signal to main body ECU (multiplex network body ECU). This switch turns off when door is locked and turns on when door is unlocked.
Back door lock assembly	- Built-in motor opens door latch. - Performs back door open operation according to locked/unlocked state determination of main body ECU (multiplex network body ECU).

- *1: w/ Front Passenger Side Door Control Switch

3. SYSTEM FUNCTION

(a) This system is controlled by the main body ECU (multiplex network body ECU). The main body ECU (multiplex network body ECU) outputs signals to each door lock motor. The power door lock control system has the following functions:

Function	Outline
Manual lock and unlock function	This function can lock or unlock all doors by the door control switch operation.
Key-linked lock and unlock function	This function, which is linked with the mechanical key cylinder, can lock or unlock all doors when a lock or unlock operation is effected.
Manual unlock prohibition function	When the condition below is met, unlocking the vehicle using the door control switch will be prohibited. The doors are locked using a mechanical key, door control transmitter or entry lock operation with all doors closed.
Key lock-in prevention function	When the key is in the vehicle, performing the door lock operation will not lock the door.
Key-linked 2-step unlock function	Unlocks only the driver door by turning the key cylinder once and unlocks the other doors by turning it twice.
Shift-linked automatic door lock function*2	When the conditions listed below are met consecutively, this function causes all doors to be automatically locked: - All doors are closed. - The hybrid vehicle control system is started. - The shift lever is moved to any position.
Shift-linked automatic door unlock function	When the conditions listed below are met consecutively, this function causes all doors to be automatically unlocked: - The power switch is on (IG). - Push the P position switch.
Speed-sensitive automatic door lock function*3	When the conditions listed below are met consecutively, this function causes all doors to be automatically locked: - All doors are closed. - Any of the doors is unlocked. - Vehicle speed is higher than approximately 20 km/h (12 mph).
Opening driver door-linked automatic door unlock*4	All doors are unlocked automatically when the driver door is opened within 10 seconds after the power switch is turned from on (IG) to off.

- *2: Default setting for Korea is OFF.
- *3: Default setting for except Korea is OFF.
- *4: Default setting is OFF.

HOW TO PROCEED WITH TROUBLESHOOTING

HINT:

- Use the following procedure to troubleshoot the power door lock control system.
- *: Use the Techstream.

1.	VEHICLE BROUGHT TO WORKSHOP
----	-----------------------------

NEXT

2.	CUSTOMER PROBLEM ANALYSIS CHECK
----	---------------------------------

HINT:

- In troubleshooting, confirm that the problem symptoms have been accurately identified. Preconceptions should be discarded in order to make an accurate judgment. To clearly understand what the problem symptoms are, it is extremely important to ask the customer about the problem and the conditions at the time the malfunction occurred.
- Gather as much information as possible for reference. Past problems that seem unrelated may also help in some cases.
- The following 5 items are important points for problem analysis:

What	Vehicle model, system name
When	Date, time, occurrence frequency
Where	Road conditions
Under what conditions?	Running conditions, driving conditions, weather conditions
How did it happen?	Problem symptoms

NEXT

3.	INSPECT BATTERY VOLTAGE
----	-------------------------

(a) Measure the battery voltage with the power switch off.

Standard Voltage:

11 to 14 V

If the voltage is below 11 V, recharge or replace the battery before proceeding to the next step.

NEXT

4.	SYSTEM CHECK
----	--------------

(a) Check the vehicle specification.

Result:

Result	Proceed to
w/ Entry System Back Door Open Function	A
w/o Entry System Back Door Open Function	B

B ► Go to step 6

A
▼

5.	INSPECT COMMUNICATION FUNCTION OF CAN COMMUNICATION SYSTEM*
----	---

(a) Use the Techstream to check if the CAN communication system is functioning normally.

Result:

Result	Proceed to
DTC is not output	A
DTC is output	B

B ►  GO TO CAN COMMUNICATION SYSTEM

A
▼

6.	INSPECT COMMUNICATION FUNCTION OF LIN COMMUNICATION SYSTEM*
----	---

(a) Use the Techstream to check if the LIN communication system is functioning normally .

Result:

Result	Proceed to
DTC is not output	A
DTC is output	B

B ►  GO TO LIN COMMUNICATION SYSTEM

A
▼

7.	CHECK FOR DTC (MASTER SWITCH)*
----	--------------------------------

(a) Clear the DTCs .

(b) Recheck for DTCs.

Result:

Result	Proceed to
DTC B2312 is not output	A
DTC B2312 is output	B

B ►  GO TO POWER WINDOW CONTROL SYSTEM

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A
▼

8.	PROBLEM SYMPTOMS TABLE
----	------------------------

(a) Refer to Problem Symptoms Table [INFO](#).

Result:

Result	Proceed to
Fault is not listed in Problem Symptoms Table	A
Fault is listed in Problem Symptoms Table	B

B ► Go to step 10

A
▼

9.	OVERALL ANALYSIS AND TROUBLESHOOTING*
----	---------------------------------------

(a) Terminals of ECU [INFO](#)

(b) Data List / Active Test [INFO](#)

(c) Operation Check [INFO](#)

NEXT

▼

10.	REPAIR OR REPLACE
-----	-------------------

NEXT

▼

11.	CONFIRMATION TEST
-----	-------------------

NEXT ► **END**

OPERATION CHECK

1. CHECK POWER DOOR LOCK OPERATION

NOTICE:

The operation check below is based on the non-customized initial condition of the vehicle.

(a) Check basic functions.

- (1) Check that all doors lock when the lock side of the door control switch (for manual operation) is pressed, and all doors unlock when the unlock side is pressed.
- (2) Check that all doors lock when the driver door lock key cylinder is turned to lock using the key.
- (3) Check that the driver door unlock when the driver door lock key cylinder is turned to unlock using the key.
- (b) Check the key lock-in prevention function.

NOTICE:

In order to prevent the key from being locked in, the following inspection should be performed with the driver door window open.

- (1) Turn the power switch on (IG) or (ACC).
- (2) With the driver door open, check that all doors unlock immediately after the door lock knob for the driver door is locked.
- (3) With the driver door open, check that all doors unlock immediately after the lock side of the door control switch (for manual operation) is pressed.
- (4) With the driver door open, lock the driver door lock knob and hold it for 2 seconds or more, then close the driver door and check that all doors unlock.
- (c) Check the security function of the door lock control system.
- (1) Close all doors and leave the driver door window open so that the door control switch can be operated from outside the vehicle. (Step 1)
- (2) Open the driver door and remove the key from the vehicle. With the door still open, lock the door using the lock knob. Hold the outside handle of the driver door open, and close the door while holding the handle open (confirm that the lock knob remained in the lock position). Then, check that the doors do not unlock when the unlock side of the door control switch (for manual operation) is pressed from outside the vehicle.
- (3) Starting from Step 1, with the key outside the vehicle, close and lock the driver door using the mechanical key. Then, check that the doors do not unlock when the unlock side of the door control switch (for manual operation) is pressed from outside the vehicle.

(4) Starting from Step 1, with the key outside the vehicle, close and lock the driver door using wireless door lock or entry lock operation. Then, check that the doors do not unlock when the unlock side of the door control switch (for manual operation) is pressed from outside the vehicle.

HINT:

Check that the security function of the door lock control system is canceled under the following conditions:

- The power switch is turned on (IG).
- The driver door is unlocked using the key.
- The unlock side of the door control switch (for manual operation) is pressed after the door lock knob is unlocked manually.
- The doors are unlocked by wireless operation.

(d) Check the illumination function.

(1) Set the map light switch to the door position.

(2) When the driver door is unlocked by the key linked or wireless operation with the power switch off and all doors closed and locked, check that the roof light comes on.

(3) Check that the interior light turns off in approximately 15 seconds* if the doors have not been opened.

HINT:

*: This function can be customized .

(e) Check the key-linked 2-step unlock function.

(1) Lock all doors.

(2) Check that only the driver door unlocks when the driver door lock cylinder is turned to unlock once using the key and other doors unlock when turned to unlock consecutively once again.

(f) Check the driver door-linked automatic door unlock function.

HINT:

The default setting is OFF. If necessary, the function must be set to ON through the customize function.

(1) When the driver door is closed, turning the power switch from on (IG) to off and opening the driver door within 10 seconds will automatically unlock all doors.

(g) Check the shift linked automatic door lock function.

HINT:

The default setting for Korea is OFF. If necessary, the function must be set to ON through the customize function.

- (l) When the power switch is on (IG) and the shift lever is moved to any position, check that all doors lock automatically.
- (h) Check the shift linked automatic door unlock function.
- (1) When the power switch is on (IG) and push the P position switch, check that all doors unlock automatically.
- (i) Check the speed-sensitive automatic door lock function.

HINT:

The default setting for except Korea is OFF. If necessary, the function must be set to ON through the customize function.

- (1) Confirm that all doors lock when the vehicle speed reaches 20 km/h (12mph) if the vehicle starts off with any of the doors unlocked.

HINT:

If the vehicle is being driven after the speed-sensitive automatic door lock function has locked the doors, the speed-sensitive automatic door lock function does not attempt to relock the doors, even if any of the doors is unlocked. The vehicle must be stopped first before the speed-sensitive automatic door lock function will relock the doors.

CUSTOMIZE PARAMETERS

1. CUSTOMIZING FUNCTION WITH TECHSTREAM

HINT:

The following items can be customized.

NOTICE:

- When the customer requests a change in a function, first make sure that the function can be customized.
- Be sure to make a note of the current settings before customizing.
- When troubleshooting a function, first make sure that the function is set to the default setting.

- Connect the Techstream to the DLC3.
- Turn the power switch on (IG).
- Turn the Techstream on.
- Enter the following menus: Customize Setting.
- Select the setting by referring to the table below.

Door Lock

Display	Default	Content	Setting
Unlock Key Twice	ON	Function that unlocks only the driver door when the driver door key cylinder is turned to unlock once, and unlock all doors when it is turned to unlock twice. For the OFF setting, turning it once unlocks all doors.	ON or OFF
Auto Lock	OFF ON*	Function that locks all doors when the vehicle speed reaches a certain level.	ON or OFF
Auto Lock/Shift	ON OFF*	Function that locks all doors when the shift lever is moved from P to any position other than P while the engine is running and all doors are closed.	ON or OFF
Auto Unlock/Shift	ON	Function that unlocks all doors when the shift lever is moved to P from any position other than P while the power switch is on (IG).	ON or OFF
All Unlock/Open-Close	OFF	Function that unlocks the other doors when the driver door is opened within 10 seconds after the power switch is turned off.	ON or OFF

- *: for Korea

Illuminated Entry

Display	Default	Content	Setting
Lighting Time	15 s	Function that changes the lighting time after closing all doors. (It will quickly fade out in case of turning the power switch from off to on (ACC) or (IG).)	7.5 s, 15 s or 30 s

PROBLEM SYMPTOMS TABLE

HINT:

- Use the table below to help determine the cause of problem symptoms. If multiple suspected areas are listed, the potential causes of the symptoms are listed in order of probability in the "Suspected Area" column of the table. Check each symptom by checking the suspected areas in the order they are listed. Replace parts as necessary.
- Inspect the fuses and relays related to this system before inspecting the suspected areas below.

Power Door Lock Control System

Symptom	Suspected Area	See page
Only Driver Door LOCK/UNLOCK Functions do not Operate	Front door lock assembly (for Driver side)	INFO
	Wire harness or connector	-
	Main body ECU (Multiplex network body ECU)	-
Only Front Passenger Door LOCK/UNLOCK Functions do not Operate	Front door lock assembly (for Front passenger side)	INFO
	Wire harness or connector	-
	Main body ECU (Multiplex network body ECU)	-
Only Rear Door LH LOCK/UNLOCK Functions do not Operate	Rear door lock assembly LH	INFO
	Wire harness or connector	-
	Main body ECU (Multiplex network body ECU)	-
Only Rear Door RH LOCK/UNLOCK Functions do not Operate	Rear door lock assembly RH	INFO
	Wire harness or connector	-
	Main body ECU (Multiplex network body ECU)	-
All Doors LOCK/UNLOCK Functions do not Operate Via Master Switch, Driver Side Door Key Cylinder	LIN communication system	INFO
	Multiplex network master switch assembly	-
	Front door lock assembly (for Driver side)	-
	Wire harness or connector	-
	Main body ECU (Multiplex network body ECU)	-
All Doors LOCK/UNLOCK Functions do not Operate Via Door Control Switch*1	Door control switch assembly	INFO
	Wire harness or connector	-
	Main body ECU (Multiplex network body ECU)	-

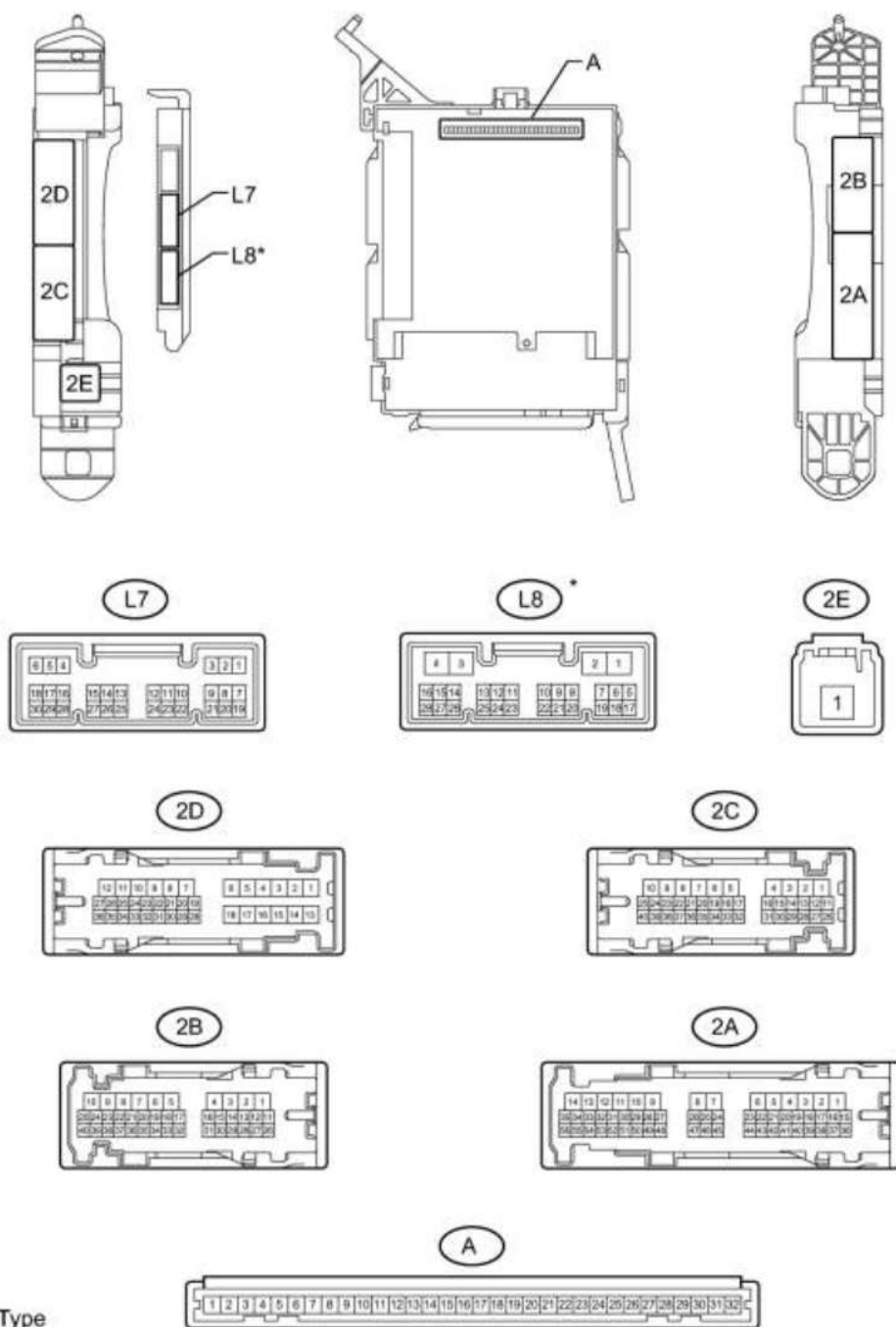
Symptom	Suspected Area	See page
Only Back Door cannot be Opened*2	Back door lock assembly	INFO
	Back door opener switch assembly	-
	Main body ECU (Multiplex network body ECU)	-
	Wire harness or connector	-
Only Back Door cannot be Opened*3	Smart key system (for Entry function)	INFO

- *1: w/ Front Passenger Side Door Control Switch
- *2: w/o Entry System Back Door Open Function
- *3: w/ Entry System Back Door Open Function

TERMINALS OF ECU

1. CHECK INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY AND MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU)

(a) Disconnect the 2B and 2C junction block connectors.



(b) Disconnect the A main body ECU connector.

(c) Measure the voltage and resistance according to the value(s) in the table below.

HINT:

Measure the values on the wire harness side with the connectors disconnected.

Tester Connection	Wiring Color	Terminal Description	Condition	Specified Condition
2B-6 (GND1) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω
2C-18 (BECU) - Body ground	Y - Body ground	Battery power supply	Power switch off	11 to 14 V
A-29 (ACC) - Body ground	-	ACC power supply	Power switch on (ACC)	11 to 14 V
A-29 (ACC) - Body ground	-	ACC power supply	Power switch off	Below 1 V
A-31 (ALTB) - Body ground	-	Battery power supply	Power switch off	11 to 14 V
A-32 (IG) - Body ground	-	Power switch power supply	Power switch on (IG)	11 to 14 V
A-32 (IG) - Body ground	-	Power switch power supply	Power switch off	Below 1 V

If the result is not as specified, there may be a malfunction in the wire harness.

(d) Reconnect the 2B and 2C junction block connectors.

(e) Reconnect the A main body ECU connector.

(f) Measure the voltage according to the value(s) in the table below.

Tester Connection	Wiring Color	Terminal Description	Condition	Specified Condition
2B-1 (ACT-) - Body ground	B - Body ground	Door lock motor unlock drive output (except driver side)	Driver or front passenger side door control switch off	Below 1 V
2B-1 (ACT-) - Body ground	B - Body ground	Door lock motor unlock drive output (except driver side)	Driver or front passenger side door control switch unlocked	11 to 14 V
2B-8 (ACT+) - Body ground	L - Body ground	Door lock motor lock drive output (all doors)	Driver or front passenger side door control switch off	Below 1 V
2B-8 (ACT+) - Body ground	L - Body ground	Door lock motor lock drive output (all doors)	Driver or front passenger side door control switch locked	11 to 14 V
2B-5 (ACTD) -	B - Body	Driver side door lock motor	Driver or front passenger side	Below 1 V

Tester Connection	Wiring Color	Terminal Description	Condition	Specified Condition
Body ground	ground	unlock drive output	door control switch off	
2B-5 (ACTD) - Body ground	B - Body ground	Driver side door lock motor unlock drive output	Driver or front passenger side door control switch unlocked	11 to 14 V
2D-36 (FRCY) - Body ground	BR - Body ground	Front passenger side door courtesy switch input	Front passenger side door open	Below 1 V
2D-36 (FRCY) - Body ground	BR - Body ground	Front passenger side door courtesy switch input	Front passenger side door closed	11 to 14 V
2D-35 (FLCY) - Body ground	V - Body ground	Driver side door courtesy switch input	Driver door open	Below 1 V
2D-35 (FLCY) - Body ground	V - Body ground	Driver side door courtesy switch input	Driver door closed	11 to 14 V
2D-25 (LSR) - Body ground	GR - Body ground	Rear door LH lock position switch input	Rear door LH unlocked	Below 1 V
2D-25 (LSR) - Body ground	GR - Body ground	Rear door LH lock position switch input	Power switch off, all doors closed and rear door LH locked	11 to 14 V
2B-29 (LSR) - Body ground	GR - Body ground	Rear door RH lock position switch input	Rear door RH unlocked	Below 1 V
2B-29 (LSR) - Body ground	GR - Body ground	Rear door RH lock position switch input	Power switch off, all doors closed and rear door RH locked	11 to 14 V
L7-6 (LRCY) - Body ground	G - Body ground	Rear door courtesy light switch input	Rear door open	Below 1 V
L7-6 (LRCY) - Body ground	G - Body ground	Rear door courtesy light switch input	Rear door closed	11 to 14 V
L7-7 (LSFL) - Body ground	GR - Body ground	Driver door lock position switch input	Driver door unlocked	Below 1 V
L7-7 (LSFL) - Body ground	GR - Body ground	Driver door lock position switch input	Power switch off, all doors closed and driver door locked	11 to 14 V
L7-9 (L1) - Body ground*1	LG - Body ground	Front passenger side door control switch input	Front passenger side door control switch locked	Below 1 V
L7-9 (L1) - Body ground*1	LG - Body ground	Front passenger side door control switch input	Front passenger side door control switch off	11 to 14 V
L7-10 (UL1) - Body ground*1	BR - Body ground	Front passenger side door control switch input	Front passenger side door control switch unlocked	Below 1 V
L7-10 (UL1) - Body ground*1	BR - Body ground	Front passenger side door control switch input	Front passenger side door control switch off	11 to 14 V
L7-11 (L2) - Body ground	G - Body ground	Driver door key-linked lock input	Driver door key cylinder turned to lock	Below 1 V
L7-11 (L2) - Body ground	G - Body ground	Driver door key-linked lock input	Driver door key cylinder off	11 to 14 V
L7-18 (LSFR) - Body ground	LG - Body ground	Front passenger side door lock position switch input	Front passenger side door unlocked	Below 1 V
L7-18 (LSFR) -	LG - Body	Front passenger side door	Power switch off, all doors	11 to 14 V

Tester Connection	Wiring Color	Terminal Description	Condition	Specified Condition
Body ground	ground	lock position switch input	closed and front passenger side door locked	
L7-19 (BCTY) - Body ground	L - Body ground	Back door courtesy light switch input	Back door open	Below 1 V
L7-19 (BCTY) - Body ground	L - Body ground	Back door courtesy light switch input	Back door closed	11 to 14 V
L7-23 (BDSU) - Body ground*2	GR - Body ground	Back door opener switch input	Back door opener switch pushed	Below 1 V
L7-23 (BDSU) - Body ground*2	GR - Body ground	Back door opener switch input	Back door opener switch not pushed	11 to 14 V
L7-24 (UL3) - Body ground	V - Body ground	Driver door key-linked unlock input	Driver door key cylinder turned to unlock	Below 1 V
L7-24 (UL3) - Body ground	V - Body ground	Driver door key-linked unlock input	Driver door key cylinder off	11 to 14 V

• *1: w/ Front Passenger Side Door Control Switch

• *2: w/o Entry System Back Door Open Function

If the result is not as specified, the main body ECU (multiplex network body ECU) may have a malfunction.

2. CHECK CERTIFICATION ECU (SMART KEY ECU ASSEMBLY) (w/ Entry System Back Door Open Function)



(a) Disconnect the L62 certification ECU (smart key ECU assembly) connector.

(b) Measure the resistance according to the value(s) in the table below.

HINT:

Measure the values on the wire harness side with the connector disconnected.

Tester Connection	Wiring Color	Terminal Description	Condition	Specified Condition
L62-22 (TSW5) - Body	GR - Body	Back door opener switch	Back door opener	Below 1 Ω

Tester Connection	Wiring Color	Terminal Description	Condition	Specified Condition
ground	ground	signal	switch on	
L62-22 (TSW5) - Body ground	GR - Body ground	Back door opener switch signal	Back door opener switch off	10 kΩ or higher

If the result is not as specified, there may be a malfunction in the wire harness.

(c) Reconnect the L62 certification ECU (smart key ECU assembly) connector.

(d) Measure the voltage according to the value(s) in the table below.

Tester Connection	Wiring Color	Terminal Description	Condition	Specified Condition
L62-22 (TSW5) - Body ground	GR - Body ground	Back door opener switch signal	Back door opener switch off	11 to 14 V
L62-22 (TSW5) - Body ground	GR - Body ground	Back door opener switch signal	Back door opener switch on	Below 1 V

If the result is not as specified, the certification ECU (smart key ECU assembly) may have a malfunction.

DIAGNOSIS SYSTEM

1. CHECK DLC3

(a) Check the DLC3 .

2. INSPECT BATTERY VOLTAGE

(a) Measure the battery voltage with the power switch off.

Standard Voltage:

11 to 14 V

If the voltage is below 11 V, recharge or replace the battery.

DATA LIST / ACTIVE TEST

1. DATA LIST

HINT:

Using the Techstream to read the Data List allows the values or states of switches, sensors, actuators and other items to be read without removing any parts. This non-intrusive inspection can be very useful because intermittent conditions or signals may be discovered before parts or wiring is disturbed. Reading the Data List information early in troubleshooting is one way to save diagnostic time.

NOTICE:

In the table below, the values listed under "Normal Condition" are reference values. Do not depend solely on these reference values when deciding whether a part is faulty or not.

- (a) Connect the Techstream to the DLC3.
- (b) Turn the power switch on (IG).
- (c) Turn the Techstream on.
- (d) Enter the following menus: Body Electrical / Main Body or Master Switch / Data List.
- (e) Read the Data List according to the display on the Techstream.

Main Body (Main Body ECU (Multiplex Network Body ECU))

Tester Display	Measurement Item/Range	Normal Condition	Diagnostic Note
RR Door Courtesy SW	Rear door courtesy light switch signal/ON or OFF	ON: Rear left side or rear right side door open OFF: Rear left side and rear right side door closed	-
RL Door Courtesy SW	Rear door courtesy light switch signal/ON or OFF	ON: Rear left side or rear right side door open OFF: Rear left side and rear right side door closed	-
Back Door Courtesy SW	Back door courtesy switch signal/ON or OFF	ON: Back door open OFF: Back door closed	-
Back Door Open	Back door lock/Permit or Prohibit	Permit: Back door unlocked Prohibit: Back door locked	-
Door Lock SW-Lock*1	Front passenger side door control switch lock signal/ON or OFF	ON: Lock side of front passenger side door control switch pushed	-

Tester Display	Measurement Item/Range	Normal Condition	Diagnostic Note
		OFF: Lock side of front passenger side door control switch not pushed	
Door Lock SW-Unlock*1	Front passenger side door control switch unlock signal/ON or OFF	ON: Unlock side of front passenger side door control switch pushed OFF: Unlock side of front passenger side door control switch not pushed	-
Door Key SW-Lock	Driver door key-linked lock/unlock switch lock signal/ON or OFF	ON: Driver door key cylinder turned to lock position OFF: Driver door key cylinder not turned to lock position	-
D Door Key SW-UL	Driver door key-linked lock/unlock switch unlock signal/ON or OFF	ON: Driver door key cylinder turned to unlock position OFF: Driver door key cylinder not turned to unlock position	-
FR Door Lock Pos	Front passenger side door lock position switch signal/LOCK or UNLOCK	LOCK: Front passenger side door locked UNLOCK: Front passenger side door unlocked	-
FR Door Courtesy	Front passenger side door courtesy light switch signal/ON or OFF	ON: Front passenger side door open OFF: Front passenger side door closed	-
FL Door Lock Pos	Driver door lock position switch signal/LOCK or UNLOCK	LOCK: Driver door locked UNLOCK: Driver door unlocked	-
FL Door Courtesy	Driver door courtesy light switch signal/ON or OFF	ON: Driver door open OFF: Driver door closed	-
Back Door Open Handle SW*2	Back door opener switch signal/ON or OFF	ON: Back door opener switch pushed OFF: Back door opener switch not pushed	-
RR-Door Lock Pos SW	Rear door lock position switch signal/ON or OFF	ON: Rear left side or rear right side door unlocked OFF: Rear left side and rear right side door locked	-
RL-Door Lock Pos SW	Rear door lock position switch signal/ON or OFF	ON: Rear left side or rear right side	-

Tester Display	Measurement Item/Range	Normal Condition	Diagnostic Note
		door unlocked OFF: Rear left side and rear right side door locked	
Unlock Key Twice	Key-linked 2-step unlock function/ON or OFF	Customized value displayed	-
Auto Lock	Speed-sensitive automatic door lock function/ON or OFF	Customized value displayed	-
Auto Lock/Shift	Shift-linked automatic door lock function/ON or OFF	Customized value displayed	-
Auto Unlock/Shift	Shift-linked automatic door unlock function/ON or OFF	Customized value displayed	-
All Unlock/Open-Close	Driver door-linked automatic door unlock function/ON or OFF	Customized value displayed	-

• *1: w/ Front Passenger Side Door Control Switch

• *2: w/o Entry System Back Door Open Function

Master Switch (Multiplex Network Master Switch Assembly)

Tester Display	Measurement Item/Range	Normal Condition	Diagnostic Note
Door Lock Switch Status	Driver door control switch lock signal/ON or OFF	ON: Lock side of driver door control switch pushed OFF: Lock side of driver door control switch not pushed	-
Door Unlock Switch Status	Driver door control switch unlock signal/ON or OFF	ON: Unlock side of driver door control switch pushed OFF: Unlock side of driver door control switch not pushed	-

2. ACTIVE TEST

HINT:

Using the Techstream to perform Active Tests allows relays, VSVs, actuators and other items to be operated without removing any parts. This non-intrusive functional inspection can be very useful because intermittent operation may be discovered before parts or wiring is disturbed. Performing Active Tests early in troubleshooting is one way to save diagnostic time. Data List information can be displayed while performing Active Tests.

(a) Connect the Techstream to the DLC3.

(b) Turn the power switch on (IG).

- (c) Turn the Techstream on.
- (d) Enter the following menus: Body Electrical / Main Body / Active Test.
- (e) Perform the Active Test according to the display on the Techstream.

Main Body (Main Body ECU (Multiplex Network Body ECU))

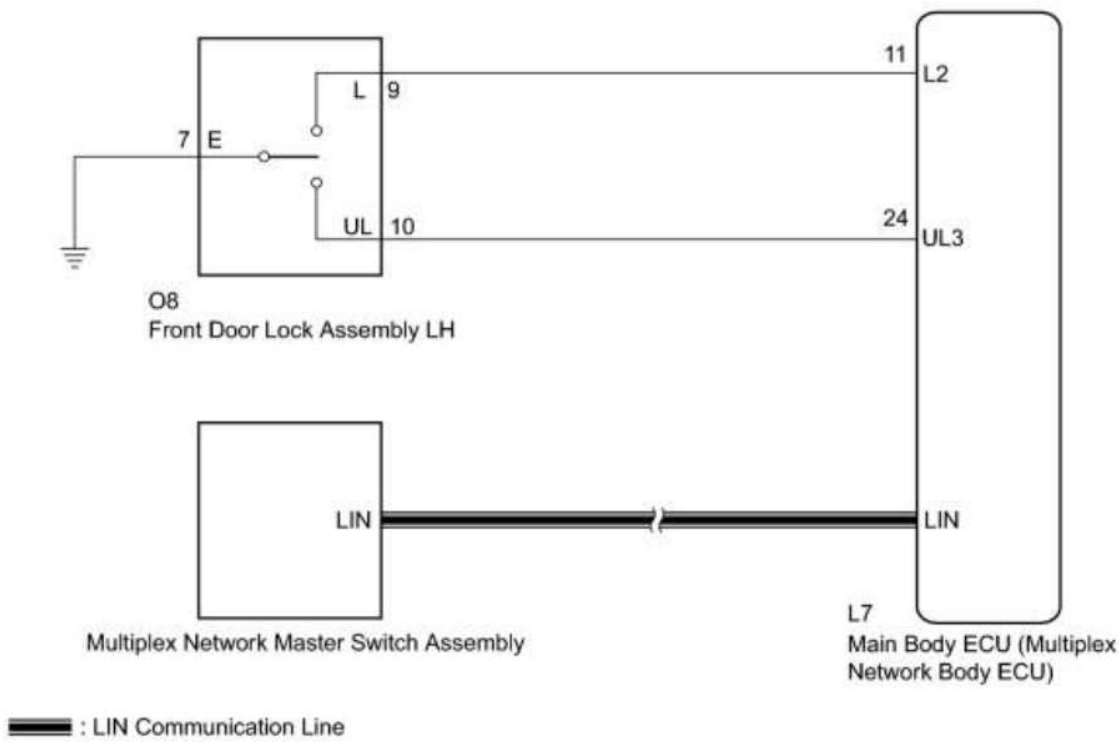
Tester Display	Test Part	Control Range	Diagnostic Note
Door Lock	Operate door lock motor	Unlock/Lock/OFF	-
D-Door Unlock	Operate driver side door lock motor	ON/OFF	-
Trunk and Back-Door Open	Operate back door lock motor	ON/OFF	-

All Doors LOCK/UNLOCK Functions do not Operate Via Master Switch, Driver Side Door Key Cylinder

DESCRIPTION

The main body ECU (multiplex network body ECU) receives switch signals from the multiplex network master switch assembly, and driver side door key cylinder switch signals from the front door lock assembly LH. The main body ECU (multiplex network body ECU) activates the door lock motor on each door according to these signals.

WIRING DIAGRAM



INSPECTION PROCEDURE

PROCEDURE

1.
- CHECK DOOR LOCK OPERATION

(a) Check door lock operation INFO.

Result:

Result	Proceed to
2010 Toyota Prius	Repair Manual

Result	Proceed to
All doors cannot be locked through multiplex network master switch	A
All doors cannot be locked through driver door key cylinder	B

B [▶ READ VALUE USING TECHSTREAM \(DOOR KEY LINKED LOCK AND UNLOCK SWITCH\)](#)

A



2. CHECK DTC OUTPUT (LIN COMMUNICATION SYSTEM)

(a) Clear the DTC [INFO](#).

(b) Recheck for DTCs.

OK:

DTC B1206 is not output.

NG [▶ GO TO LIN COMMUNICATION SYSTEM \(DTC B1206\)](#)

OK



3. REPLACE MULTIPLEX NETWORK MASTER SWITCH ASSEMBLY

(a) Replace the multiplex network master switch assembly [INFO](#).

NEXT



4. CHECK DOOR LOCK OPERATION

(a) Check that all doors can be locked and unlocked by using the multiplex network master switch [INFO](#).

OK:

All doors can be locked and unlocked with the multiplex network master switch.

NG [▶ REPLACE MAIN BODY ECU \(MULTIPLEX NETWORK BODY ECU\)](#)

OK [▶ END \(MULTIPLEX NETWORK MASTER SWITCH ASSEMBLY WAS DEFECTIVE\)](#)

5. READ VALUE USING TECHSTREAM (DOOR KEY LINKED LOCK AND UNLOCK SWITCH)

(a) Connect the Techstream to the DLC3.

- (b) Turn the power switch on (IG).
- (c) Turn the Techstream on.
- (d) Enter the following menus: Body Electrical / Main Body / Data List.
- (e) Read the Data List according to the display on the Techstream.

Main Body (Main Body ECU (Multiplex Network Body ECU))

Tester Display	Measurement Item/Range	Normal Condition	Diagnostic Note
Door Key SW-Lock	Driver door key-linked lock/unlock switch lock signal/ON or OFF	ON: Driver door key cylinder turned to lock position OFF: Driver door key cylinder not turned to lock position	-
D Door Key SW-UL	Driver door key-linked lock/unlock switch unlock signal/ON or OFF	ON: Driver door key cylinder turned to unlock position OFF: Driver door key cylinder not turned to unlock position	-

OK:

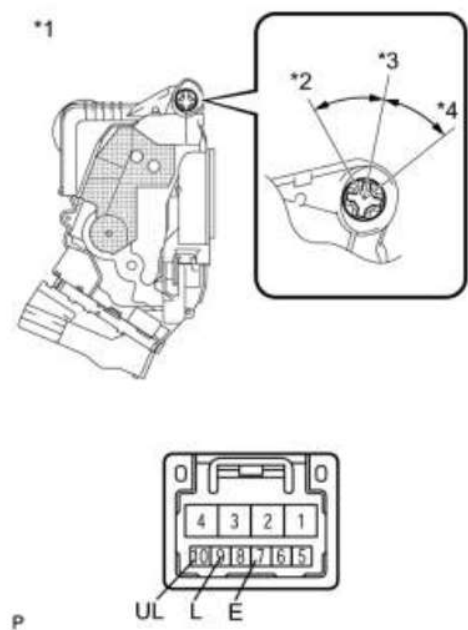
The Techstream indicates ON or OFF according to the key cylinder operation shown in the table.

NG ► [INSPECT FRONT DOOR LOCK ASSEMBLY LH \(DOOR KEY LINKED LOCK AND UNLOCK SWITCH\)](#)

OK ► **REPLACE MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU)**

6.	INSPECT FRONT DOOR LOCK ASSEMBLY LH (DOOR KEY LINKED LOCK AND UNLOCK SWITCH)
----	--

- (a) Remove the front door lock assembly LH .



(b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
9 (L) - 7 (E)	Locked	Below 1 Ω
9 (L) - 7 (E)	off	10 k Ω or higher
10 (UL) - 7 (E)	Unlocked	Below 1 Ω
10 (UL) - 7 (E)	off	10 k Ω or higher

Text in Illustration

*1	Component without harness connected (Front Door Lock Assembly LH)
*2	Lock
*3	off
*4	Unlock

NG▶ REPLACE FRONT DOOR LOCK ASSEMBLY LH

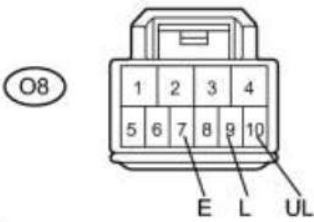
OK



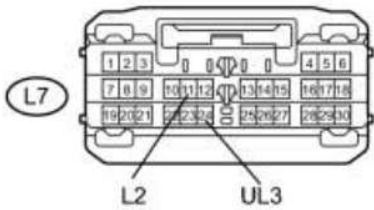
7.	CHECK HARNESS AND CONNECTOR (FRONT DOOR LOCK - MAIN BODY ECU)
----	---

(a) Disconnect the main body ECU (multiplex network body ECU) connector.

*1



*2



(b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
O8-9 (L) - L7-11 (L2)	Always	Below 1 Ω
O8-10 (UL) - L7-24 (UL3)	Always	Below 1 Ω
O8-7 (E) - Body ground	Always	Below 1 Ω
L7-11 (L2) - Body ground	Always	10 kΩ or higher
L7-24 (UL3) - Body ground	Always	10 kΩ or higher

Text in Illustration

*1	Front view of wire harness connector (to Front Door Lock Assembly LH)
*2	Front view of wire harness connector (to Main Body ECU (Multiplex Network Body ECU))

NG REPAIR OR REPLACE HARNESS OR CONNECTOR

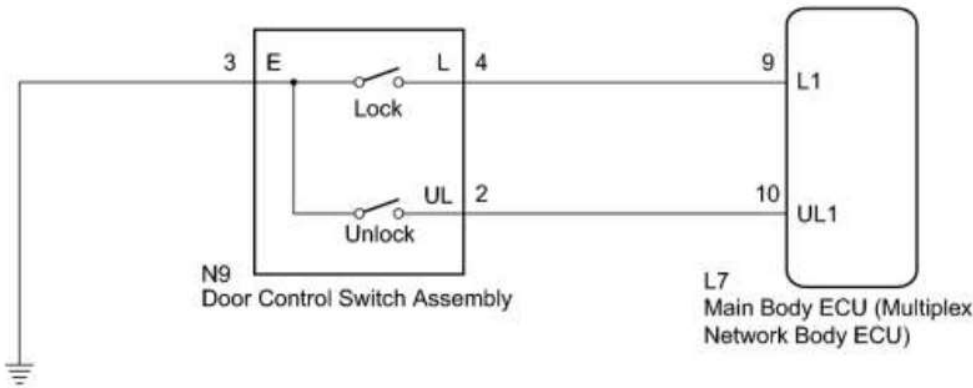
OK REPLACE MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU)

All Doors LOCK/UNLOCK Functions do not Operate Via Door Control Switch

DESCRIPTION

The main body ECU (multiplex network body ECU) receives switch signals from the door control switch assembly and activates the door lock motor on each door according to these signals.

WIRING DIAGRAM



INSPECTION PROCEDURE

PROCEDURE

1. READ VALUE USING TECHSTREAM (DOOR CONTROL SWITCH)

- (a) Connect the Techstream to the DLC3.
- (b) Turn the power switch on (IG).
- (c) Turn the Techstream on.
- (d) Enter the following menus: Body Electrical / Main Body / Data List.
- (e) Read the Data List according to the display on the Techstream.

Main Body (Main Body ECU (Multiplex Network Body ECU))

Tester Display	Measurement Item/Range	Normal Condition	Diagnostic Note
Door Lock SW-Lock	Front passenger side door control switch lock signal/ON or OFF	ON: Lock side of front passenger side door control switch pushed	-

Tester Display	Measurement Item/Range	Normal Condition	Diagnostic Note
		OFF: Lock side of front passenger side door control switch not pushed	
Door Lock SW-Unlock	Front passenger side door control switch unlock signal/ON or OFF	ON: Unlock side of front passenger side door control switch pushed OFF: Unlock side of front passenger side door control switch not pushed	-

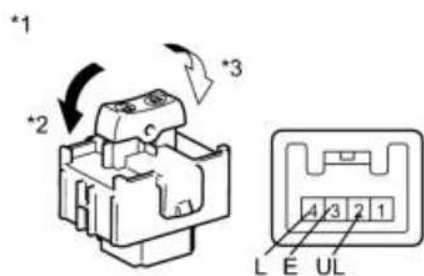
OK:

The Techstream indicates ON or OFF according to the switch operation shown in the table.

NG [INSPECT DOOR CONTROL SWITCH ASSEMBLY](#)

OK [REPLACE MAIN BODY ECU \(MULTIPLEX NETWORK BODY ECU\)](#)

2.	INSPECT DOOR CONTROL SWITCH ASSEMBLY
----	--------------------------------------



(a) Remove the door control switch assembly [INFO](#).

(b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
4 (L) - 3 (E)	Locked	Below 1 Ω
4 (L) - 3 (E)	off	10 k Ω or higher
2 (UL) - 3 (E)	Unlocked	Below 1 Ω
2 (UL) - 3 (E)	off	10 k Ω or higher

Text in Illustration

*1	Component without harness connected (Door Control Switch Assembly)
*2	Unlock
*3	Lock

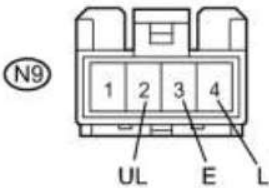
NG▶REPLACE DOOR CONTROL SWITCH ASSEMBLY

OK

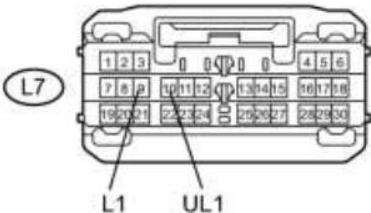


3.	CHECK HARNESS AND CONNECTOR (DOOR CONTROL SWITCH - MAIN BODY ECU AND BODY GROUND)
----	---

*1



*2



(a) Disconnect the main body ECU (multiplex network body ECU) connector.

(b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
N9-2 (UL) - L7-10 (UL1)	Always	Below 1 Ω
N9-4 (L) - L7-9 (L1)	Always	Below 1 Ω
N9-3 (E) - Body ground	Always	Below 1 Ω
N9-2 (UL) - Body ground	Always	10 kΩ or higher
N9-4 (L) - Body ground	Always	10 kΩ or higher

Text in Illustration

*1	Front view of wire harness connector (to Door Control Switch Assembly)
*2	Front view of wire harness connector (to Main Body ECU (Multiplex Network Body ECU))

NG▶REPAIR OR REPLACE HARNESS OR CONNECTOR

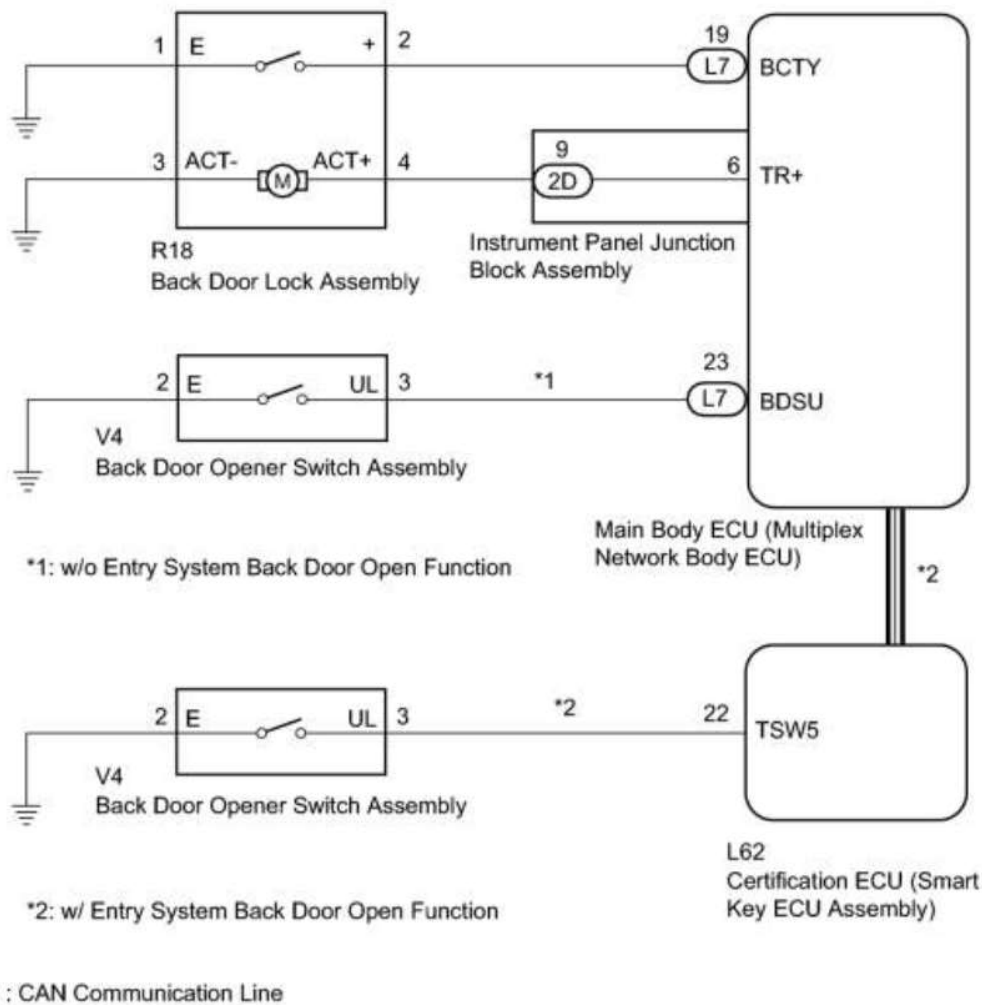
OK  **REPLACE MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU)**

Only Back Door cannot be Opened

DESCRIPTION

The main body ECU (multiplex network body ECU) receives signals from the back door opener switch assembly. Then, the main body ECU (multiplex network body ECU) activates the back door lock motor.

WIRING DIAGRAM



INSPECTION PROCEDURE

PROCEDURE

1. SYSTEM CHECK

(a) Check the vehicle specification.

Result:

Result	Proceed to
w/o Entry System Back Door Open Function	A
w/ Entry System Back Door Open Function	B

B [▶ INSPECT BACK DOOR LOCK ASSEMBLY](#)

A



2. CHECK POWER DOOR LOCK OPERATION (BASIC FUNCTION)

(a) Check the power door lock basic function [INFO](#).

OK:

The power door lock basic functions operate normally.

NG [▶ GO TO PROBLEM SYMPTOMS TABLE](#)

OK



3. READ VALUE USING TECHSTREAM (DOOR LOCK STATUS)

(a) Connect the Techstream to the DLC3.

(b) Turn the power switch on (IG).

(c) Turn the Techstream on.

(d) Enter the following menus: Body Electrical / Main Body / Data List.

(e) Read the Data List according to the display on the Techstream.

Main Body (Main Body ECU (Multiplex Network Body ECU))

Tester Display	Measurement Item/Range	Normal Condition	Diagnostic Note
Back Door Open	Back door lock/Permit or Prohibit	Permit: Back door unlocked Prohibit: Back door locked	-

OK:

The Techstream indicates Permit or Prohibit according to the door lock operation shown in the table.

NG  REPLACE MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU)

OK



4.	PERFORM ACTIVE TEST USING TECHSTREAM
----	--------------------------------------

- (a) Connect the Techstream to the DLC3.
- (b) Turn the power switch on (IG).
- (c) Turn the Techstream on.
- (d) Enter the following menus: Body Electrical / Main Body / Active Test.
- (e) Perform the Active Test according to the display on the Techstream.

Main Body (Main Body ECU (Multiplex Network Body ECU))

Tester Display	Test Part	Control Range	Diagnostic Note
Trunk and Back-Door Open	Operate back door lock motor	ON or OFF	-

OK:

The back door lock assembly unlatches when ON is selected.

NG  INSPECT BACK DOOR LOCK ASSEMBLY

OK



5.	READ VALUE USING TECHSTREAM
----	-----------------------------

- (a) Connect the Techstream to the DLC3.
- (b) Turn the power switch on (IG).
- (c) Turn the Techstream on.
- (d) Enter the following menus: Body Electrical / Main Body / Data List.
- (e) Read the Data List according to the display on the Techstream.

Main Body (Main Body ECU (Multiplex Network Body ECU))

Tester Display	Measurement Item/Range	Normal Condition	Diagnostic Note
----------------	------------------------	------------------	-----------------

Tester Display	Measurement Item/Range	Normal Condition	Diagnostic Note
Back Door Open Handle SW	Back door opener switch signal/ON or OFF	ON: Back door opener switch pushed OFF: Back door opener switch not pushed	-

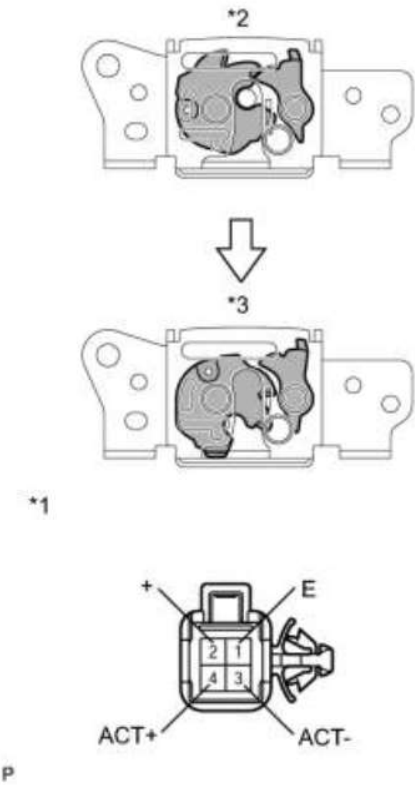
OK:

The Techstream indicates ON or OFF according to the switch operation shown in the table.

NG▶[INSPECT BACK DOOR OPENER SWITCH ASSEMBLY](#)

OK▶**REPLACE MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU)**

6.	INSPECT BACK DOOR LOCK ASSEMBLY
----	---------------------------------



(a) Remove the back door lock assembly INFO.

(b) Check the operation of the door lock motor.

- (1) Move the door lock to the lock position.
- (2) Apply battery voltage to the door lock motor and check the operation of the door lock motor.

OK:

Connection	Result
Battery positive (+) → Terminal 4 (ACT+)	Unlocks
Battery negative (-) → Terminal 3 (ACT-)	

- (c) Check the operation of the door courtesy switch.
- (1) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
1 (E) - 2 (+)	Locked	10 kΩ or higher
1 (E) - 2 (+)	Unlocked	Below 1 Ω

Text in Illustration

*1	Component without harness connected (Back Door Lock Assembly)
*2	Lock
*3	Unlock

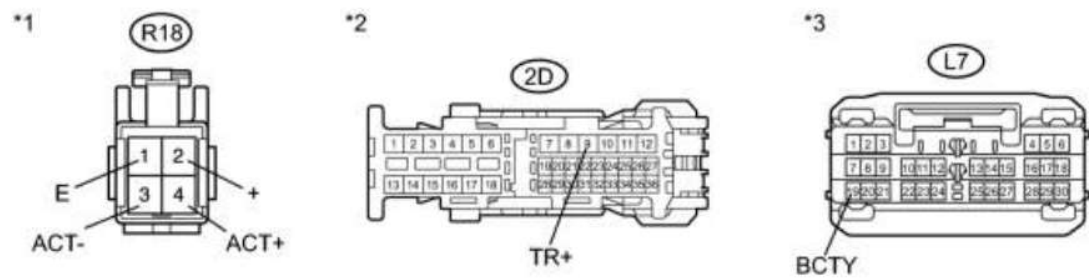
NG▶ REPLACE BACK DOOR LOCK ASSEMBLY

OK

▼

7.	CHECK HARNESS AND CONNECTOR (BACK DOOR LOCK ASSEMBLY - MAIN BODY ECU)
----	---

- (a) Disconnect the main body ECU (multiplex network body ECU) connector.



- (b) Disconnect the instrument panel junction block assembly connector.
- (c) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
R18-4 (ACT+) - 2D-9 (TR+)	Always	Below 1 Ω
R18-4 (ACT+) - Body ground	Always	10 k Ω or higher
R18-2 (+) - L7-19 (BCTY)	Always	Below 1 Ω
R18-2 (+) - Body ground	Always	10 k Ω or higher
R18-3 (ACT-) - Body ground	Always	Below 1 Ω
R18-1 (E) - Body ground	Always	Below 1 Ω

Text in Illustration

*1	Front view of wire harness connector (to Back Door Lock Assembly)	*2	Front view of wire harness connector (to Instrument Panel Junction Block Assembly)
*3	Front view of wire harness connector (to Main Body ECU (Multiplex Network Body ECU))	-	-

NG  REPAIR OR REPLACE HARNESS OR CONNECTOR

OK



8.	REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY
----	--

(a) Replace the instrument panel junction block assembly .

NEXT



9.	CHECK BACK DOOR OPEN OPERATION
----	--------------------------------

(a) Check that the back door can be opened.

OK:

The back door can be opened normally.

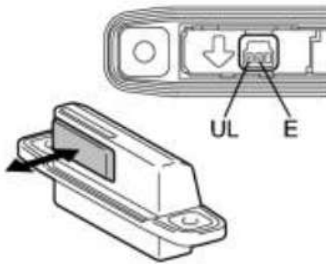
NG  REPLACE MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU)

OK  **END (INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY WAS DEFECTIVE)**

10.	INSPECT BACK DOOR OPENER SWITCH ASSEMBLY
-----	--

(a) Remove the back door opener switch assembly .

*1



(b) Check the operation of the opener switch.

(c) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
2 (E) - 3 (UL)	Back door opener switch not pushed	10 k Ω or higher
2 (E) - 3 (UL)	Back door opener switch pushed	Below 1 Ω

Text in Illustration

*1	Component without harness connected (Back Door Opener Switch Assembly)
----	---

NG REPLACE BACK DOOR OPENER SWITCH ASSEMBLY

OK



11.	CHECK HARNESS AND CONNECTOR (BACK DOOR OPENER SWITCH ASSEMBLY - MAIN BODY ECU)
-----	--

(a) Disconnect the main body ECU (multiplex network body ECU) connector.

(b) Measure the resistance according to the value(s) in the table below.

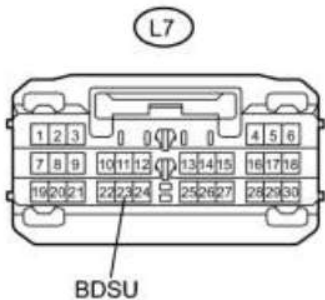
Standard Resistance:

Tester Connection	Condition	Specified Condition
V4-3 (UL) - L7-23 (BDSU)	Always	Below 1 Ω
V4-3 (UL) - Body ground	Always	10 k Ω or higher
V4-2 (E) - Body ground	Always	Below 1 Ω

*1



*2



Text in Illustration

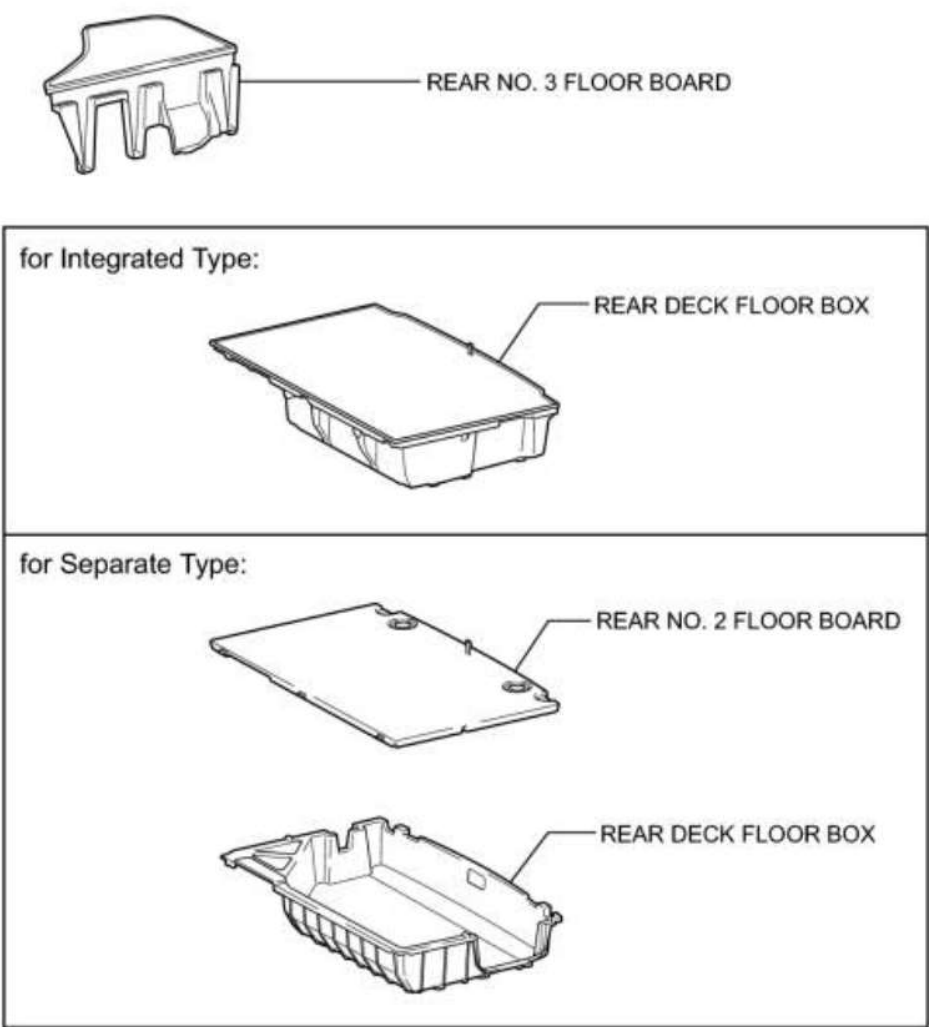
*1	Front view of wire harness connector (to Back Door Opener Switch Assembly)
*2	Front view of wire harness connector (to Main Body ECU (Multiplex Network Body ECU))

NG▶REPAIR OR REPLACE HARNESS OR CONNECTOR

OK▶REPLACE MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU)

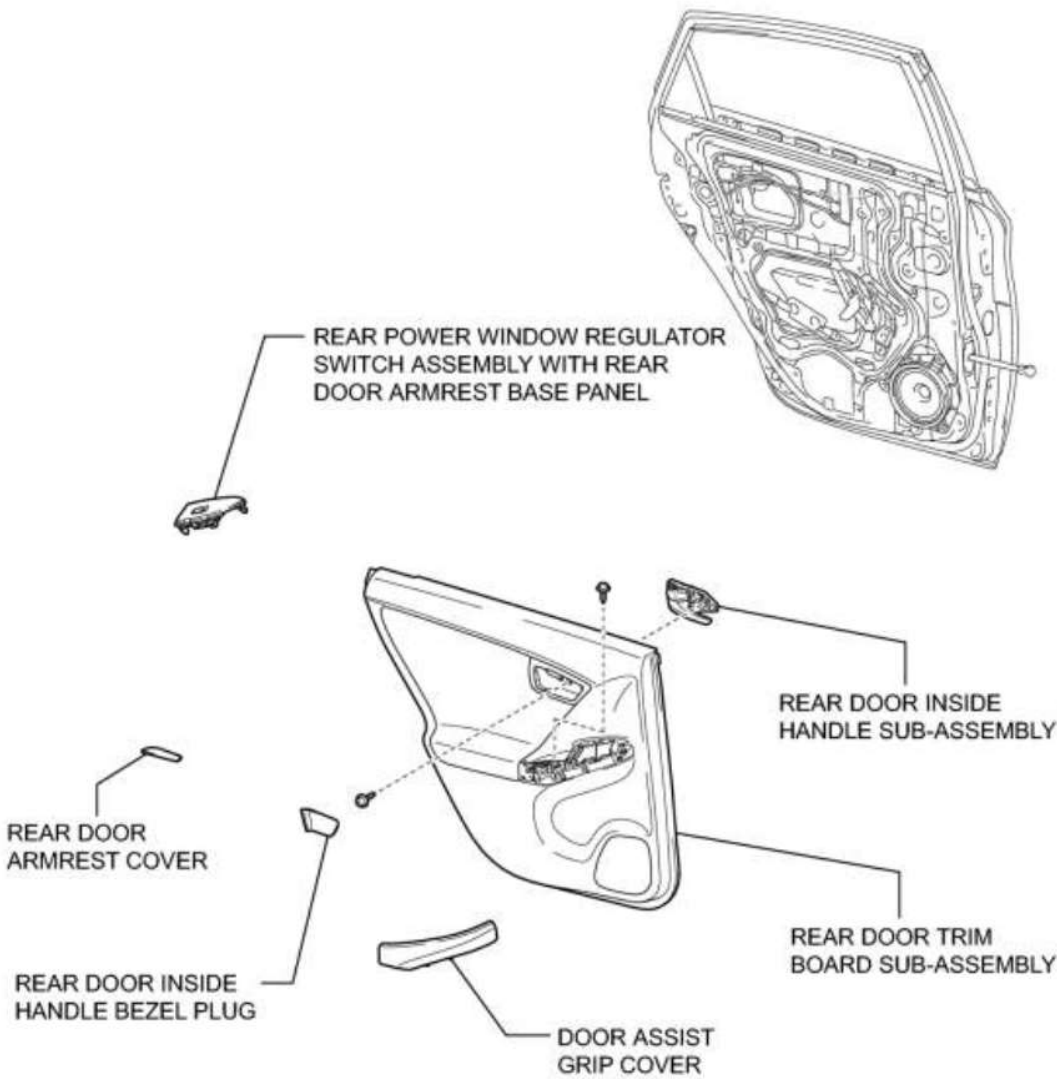
COMPONENTS

ILLUSTRATION



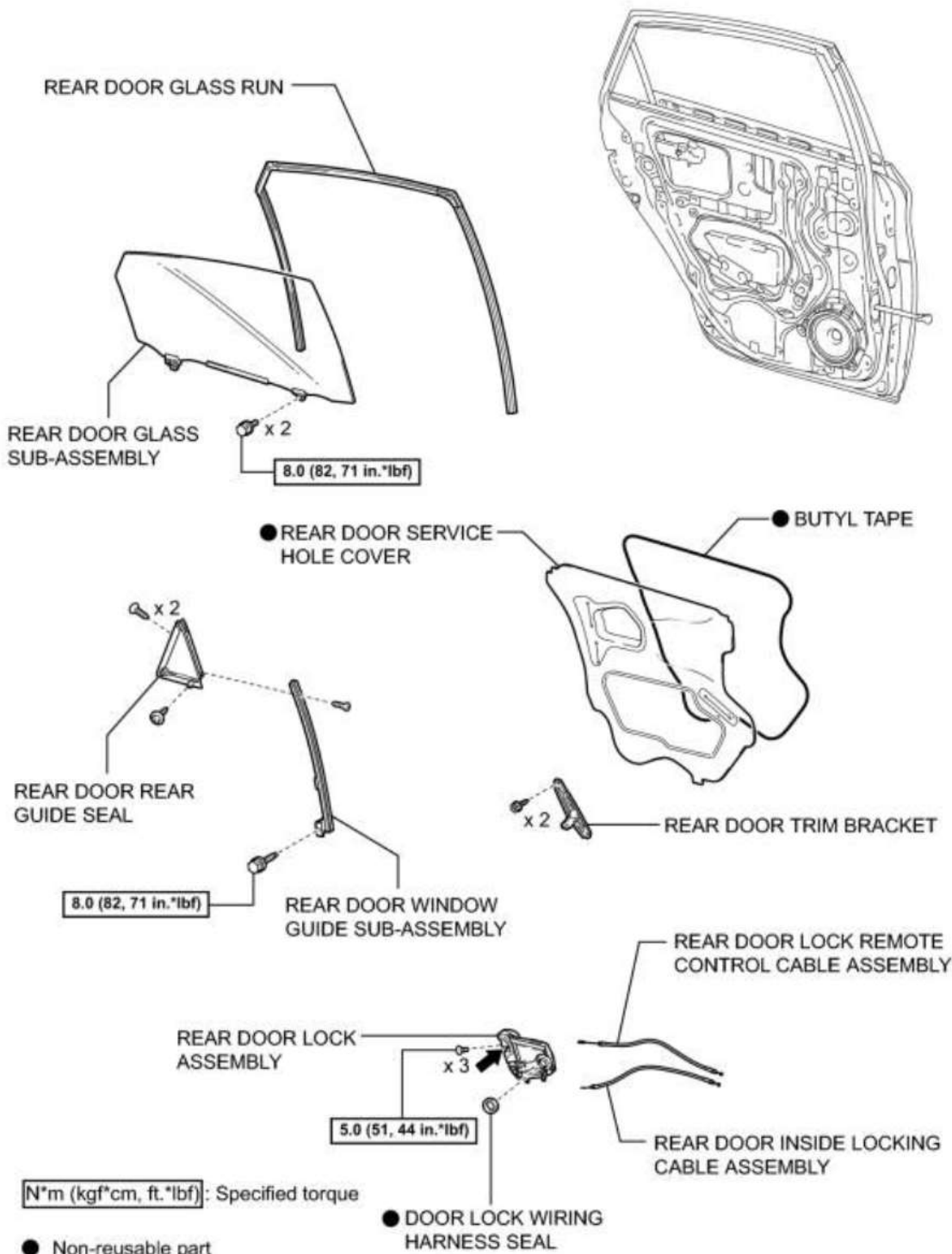
P

ILLUSTRATION



P

ILLUSTRATION

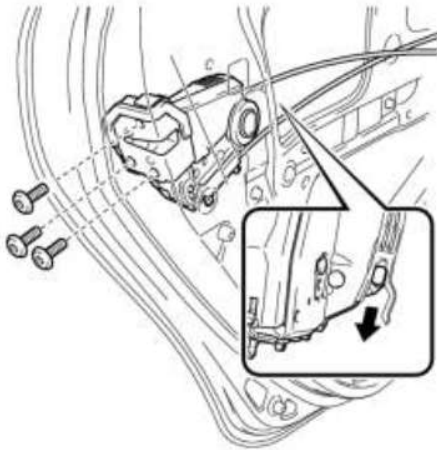


P

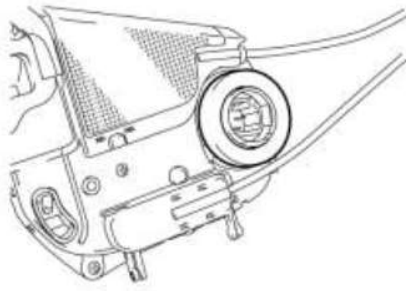
REMOVAL

1. REMOVE REAR NO. 2 FLOOR BOARD (for Separate Type) 
2. REMOVE REAR DECK FLOOR BOX 
3. REMOVE REAR NO. 3 FLOOR BOARD 
4. REMOVE REAR DOOR INSIDE HANDLE BEZEL PLUG 
5. REMOVE DOOR ASSIST GRIP COVER 
6. REMOVE REAR POWER WINDOW REGULATOR SWITCH ASSEMBLY WITH REAR DOOR ARMREST BASE PANEL 
7. REMOVE REAR DOOR ARMREST COVER 
8. REMOVE REAR DOOR TRIM BOARD SUB-ASSEMBLY 
9. REMOVE REAR DOOR INSIDE HANDLE SUB-ASSEMBLY 
10. REMOVE REAR DOOR TRIM BRACKET 
11. REMOVE REAR DOOR SERVICE HOLE COVER 
12. REMOVE REAR DOOR GLASS RUN 
13. REMOVE REAR DOOR WINDOW GUIDE SUB-ASSEMBLY 
14. REMOVE REAR DOOR REAR GUIDE SEAL 
15. REMOVE REAR DOOR GLASS SUB-ASSEMBLY 
16. REMOVE REAR DOOR LOCK ASSEMBLY

(a) Using a T30 "TORX" socket wrench, remove the 3 screws.



(b) Move the rear door lock assembly downward and pull the release plate out of the rear door outside handle frame.



(c) Remove the door lock wiring harness seal from the rear door lock assembly.

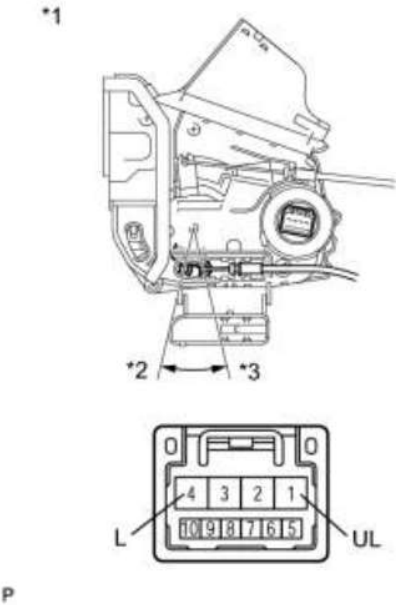
17. REMOVE REAR DOOR LOCK REMOTE CONTROL CABLE ASSEMBLY_ [INFO](#)

18. REMOVE REAR DOOR INSIDE LOCKING CABLE ASSEMBLY_ [INFO](#)

INSPECTION

1. INSPECT REAR DOOR LOCK ASSEMBLY LH

- (a) Check the operation of the door lock motor.
- (1) Apply battery voltage and check the operation of the door lock motor.
- OK:



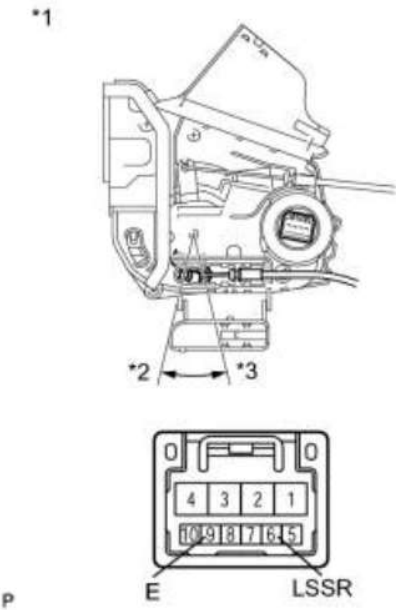
Connection	Result
Battery positive (+) → Terminal 4 (L)	Locks
Battery negative (-) → Terminal 1 (UL)	
Battery positive (+) → Terminal 1 (UL)	Unlocks
Battery negative (-) → Terminal 4 (L)	

Text in Illustration

*1	Component without harness connected (Rear Door Lock Assembly LH)
*2	Lock
*3	Unlock

If the result is not as specified, replace the rear door lock assembly LH.

(b) Check the operation of the unlock detection switch.



- (1) Measure the resistance according to the value(s) in the table below.
- Standard Resistance:

Tester Connection	Condition	Specified Condition
6 (LSSR) - 9 (E)	Locked	10 kΩ or higher
6 (LSSR) - 9 (E)	Unlocked	Below 1 Ω

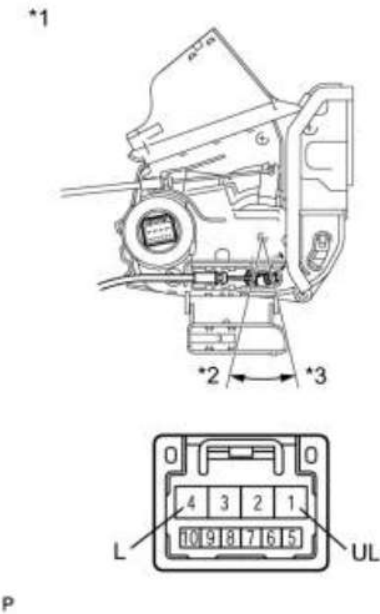
Text in Illustration

*1	Component without harness connected (Rear Door Lock Assembly LH)
*2	Lock
*3	Unlock

If the result is not as specified, replace the rear door lock assembly LH.

2. INSPECT REAR DOOR LOCK ASSEMBLY RH

- (a) Check the operation of the door lock motor.
- (1) Apply battery voltage and check the operation of the door lock motor.
- OK:



Connection	Result
Battery positive (+) → Terminal 4 (L)	Locks
Battery negative (-) → Terminal 1 (UL)	
Battery positive (+) → Terminal 1 (UL)	Unlocks
Battery negative (-) → Terminal 4 (L)	

Text in Illustration

*1	Component without harness connected (Rear Door Lock Assembly RH)
*2	Unlock
*3	Lock

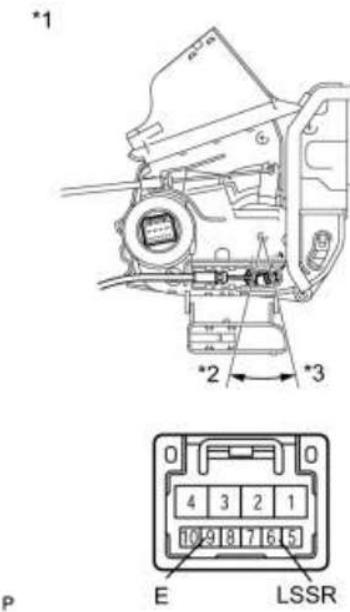
If the result is not as specified, replace the rear door lock assembly RH.

- (b) Check the operation of the unlock detection switch.
- (1) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
6 (LSSR) - 9 (E)	Locked	10 kΩ or higher
6 (LSSR) - 9 (E)	Unlocked	Below 1 Ω

Text in Illustration



*1	Component without harness connected (Rear Door Lock Assembly RH)
*2	Unlock

*3	Lock
----	------

If the result is not as specified, replace the rear door lock assembly RH.

INSTALLATION

1. INSTALL REAR DOOR INSIDE LOCKING CABLE ASSEMBLY_ INFO

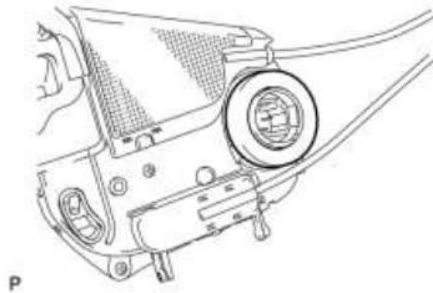
2. INSTALL REAR DOOR LOCK REMOTE CONTROL CABLE ASSEMBLY_ INFO

3. INSTALL REAR DOOR LOCK ASSEMBLY

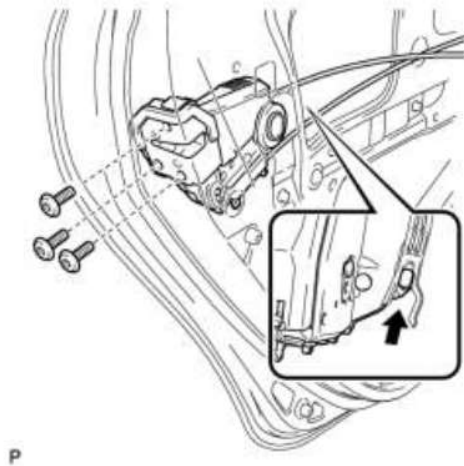
NOTICE:

- When reusing the removed rear door lock assembly, replace the door lock wiring harness seal on the connector with a new one.
- Do not allow grease or dust to adhere to the door lock wiring harness seal surface of the connector.
- Reusing the door lock wiring harness seal or using a damaged door lock wiring harness seal may cause water intrusion. This may result in a malfunction of the rear door lock assembly.

(a) Apply MP grease to the sliding parts of the rear door lock assembly.



(b) Install a new door lock wiring harness seal to the rear door lock assembly.



(c) Insert the rear door lock assembly to the rear door outside handle release plate, and set it to the rear door panel.

(d) Make sure that the rear door outside handle frame release plate is securely connected to the rear door lock assembly.

(e) Using a T30 "TORX" socket wrench, install the rear door lock assembly with the 3 screws.

Torque: **5.0 N·m (51 kgf·cm, 44in·lbf)**

4. INSTALL REAR DOOR GLASS SUB-ASSEMBLY_ INFO

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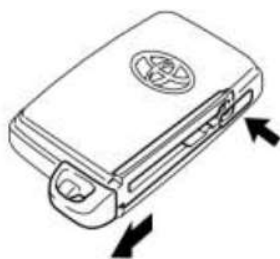
5. INSTALL REAR DOOR REAR GUIDE SEAL_ [INFO](#)
6. INSTALL REAR DOOR WINDOW GUIDE SUB-ASSEMBLY_ [INFO](#)
7. INSTALL REAR DOOR GLASS RUN_ [INFO](#)
8. INSTALL REAR DOOR SERVICE HOLE COVER_ [INFO](#)
9. INSTALL REAR DOOR TRIM BRACKET_ [INFO](#)
10. INSTALL REAR DOOR INSIDE HANDLE SUB-ASSEMBLY_ [INFO](#)
11. INSTALL REAR DOOR TRIM BOARD SUB-ASSEMBLY_ [INFO](#)
12. INSTALL REAR DOOR ARMREST COVER_ [INFO](#)
13. INSTALL REAR POWER WINDOW REGULATOR SWITCH ASSEMBLY WITH REAR DOOR ARMREST BASE PANEL_ [INFO](#)
14. INSTALL DOOR ASSIST GRIP COVER_ [INFO](#)
15. INSTALL REAR DOOR INSIDE HANDLE BEZEL PLUG_ [INFO](#)
16. INSTALL REAR NO. 3 FLOOR BOARD_ [INFO](#)
17. INSTALL REAR DECK FLOOR BOX_ [INFO](#)
18. INSTALL REAR NO. 2 FLOOR BOARD (for Separate Type)_ [INFO](#)
19. INITIALIZE POWER WINDOW CONTROL SYSTEM
[INFO](#)
20. CHECK POWER WINDOW CONTROL SYSTEM
[INFO](#)

REPLACEMENT

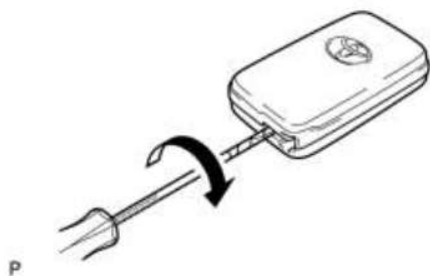
1. REMOVE TRANSMITTER BATTERY

NOTICE:

Take extra care when handling these precision electronic components.



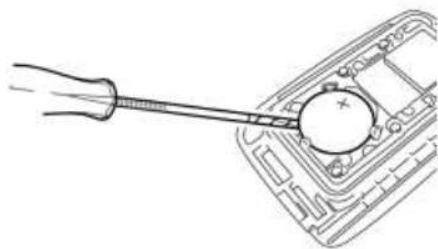
(a) Push the release hook knob and extract the mechanical key.



(b) Insert a precision screwdriver into the gap, and turn the screwdriver to detach the transmitter housing cover.

HINT:

Tape the screwdriver tip before use.



(c) Insert a precision screwdriver into the gap and gently remove the battery (lithium battery: CR1632).

- Do not push the terminals with your finger.
- Do not forcibly pry up the battery. The terminals may be damaged.
- Do not touch the battery with wet hands. Water may cause rust.
- Do not touch or move any components inside the transmitter. It may interfere with proper operation.

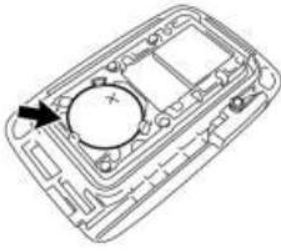
HINT:

Tape the screwdriver tip before use.

2. INSTALL TRANSMITTER BATTERY

(a) Install a new battery (lithium battery: CR1632) with the positive (+) side facing upward, as shown in the illustration.

- Do not bend the transmitter battery electrode during insertion.
- Keep the transmitter cover interior free of dust and oil.



O



Y

(b) Install the transmitter housing cover by pressing down on it as shown in the illustration.



Y

(c) Insert the mechanical key into the transmitter.

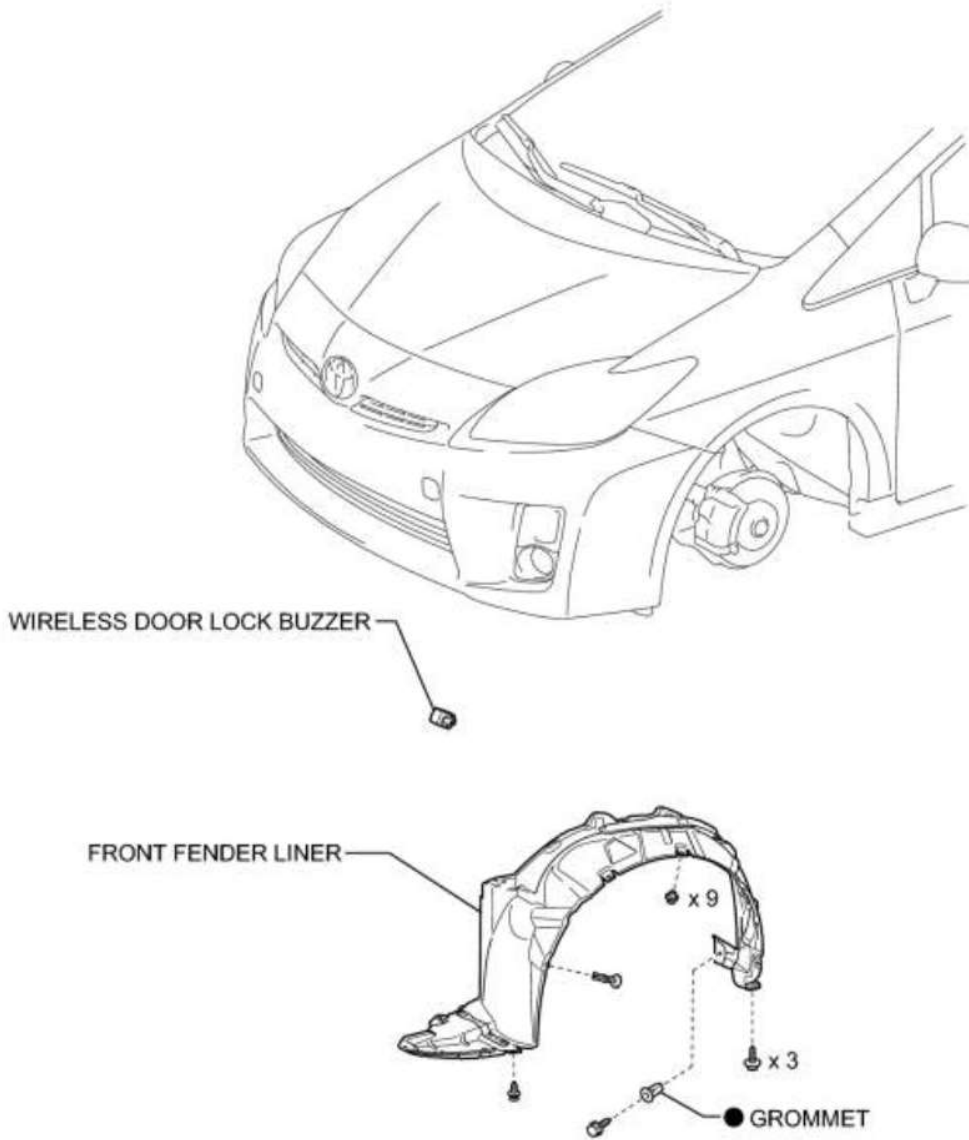
(d) Press one of the transmitter switches and check that the LED illuminates.

OK:

Transmitter LED illuminates when switch is pressed.

COMPONENTS

ILLUSTRATION



● Non-reusable part

P

REMOVAL

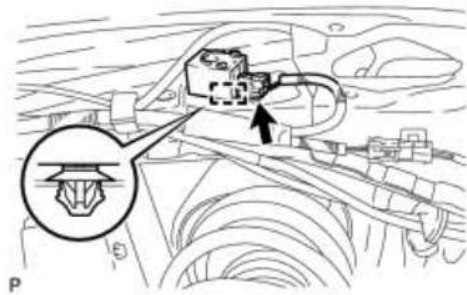
1. REMOVE FRONT WHEEL

2. REMOVE FRONT FENDER LINER

HINT:

Use the same procedure for the RH side and LH side INFO.

3. REMOVE WIRELESS DOOR LOCK BUZZER



(a) Disconnect the connector.

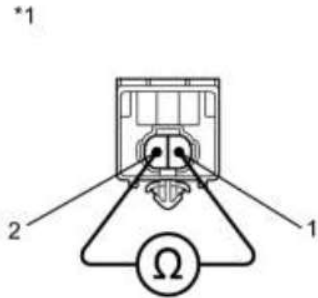
(b) Disengage the clamp and remove the wireless door lock buzzer.

INSPECTION

1. INSPECT WIRELESS DOOR LOCK BUZZER

(a) Measure the resistance according to the value(s) in the table below.

Text in Illustration



*1	Component without harness connector (Wireless Door Lock Buzzer)
----	--

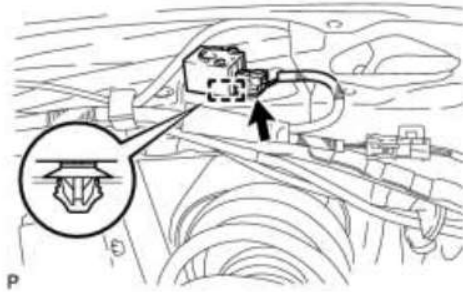
Standard Resistance:

Tester Connection	Condition	Specified Condition
1 - 2	Always	950 to 1050 Ω

If the result is not as specified, replace the wireless door lock buzzer.

INSTALLATION

1. INSTALL WIRELESS DOOR LOCK BUZZER



(a) Engage the clamp and install the wireless door lock buzzer.

(b) Connect the connector.

2. INSTALL FRONT FENDER LINER

HINT:

Use the same procedure for the RH side and LH side INFO.

3. INSTALL FRONT WHEEL_ INFO

PRECAUTION

1. PRECAUTION FOR DISCONNECTING CABLE FROM NEGATIVE AUXILIARY BATTERY TERMINAL

NOTICE:

When disconnecting the cable from the negative (-) auxiliary battery terminal, initialize the following systems after the terminal is reconnected.

System Name	See Procedure
Advanced Parking Guidance System	INFO

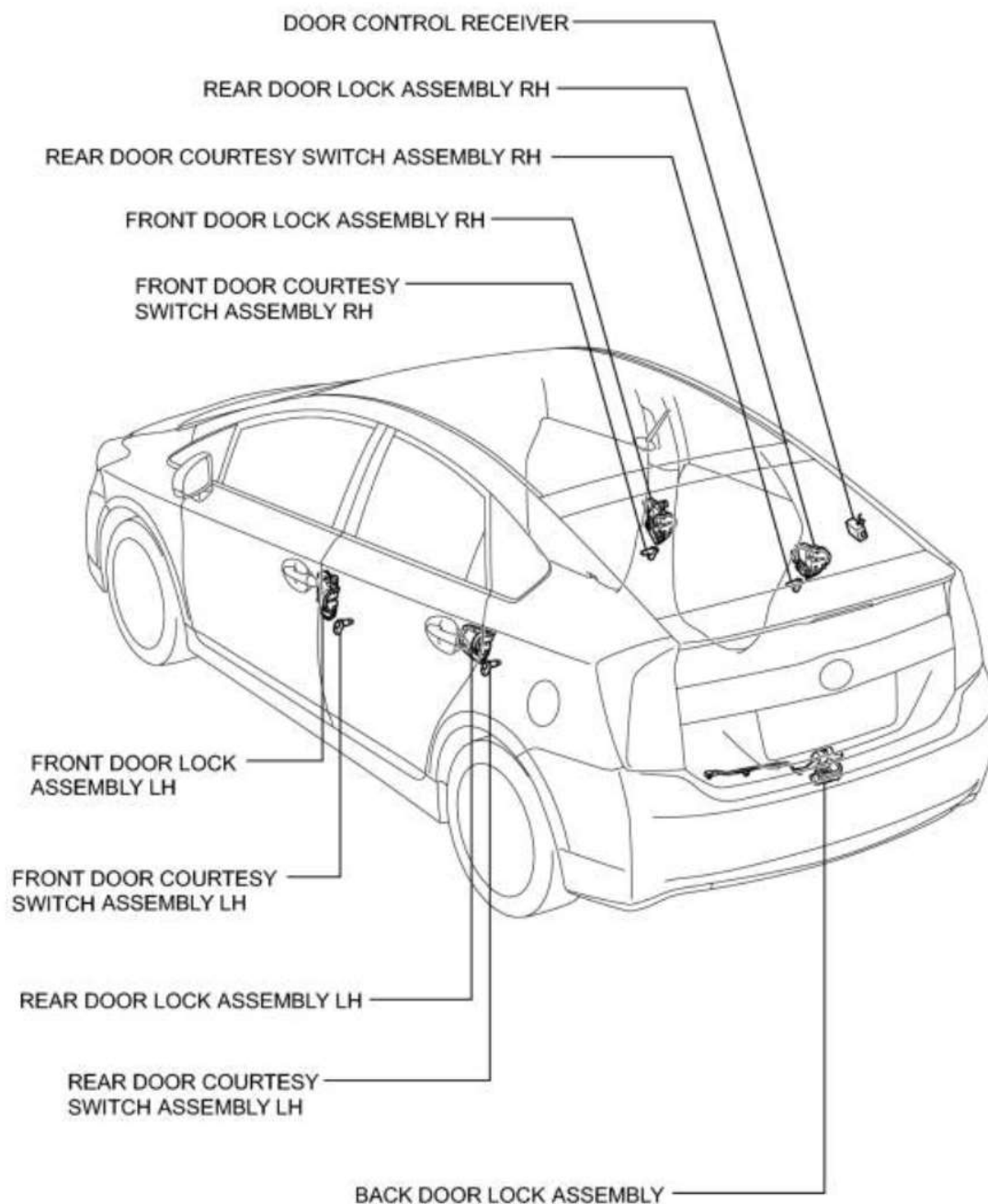
2. PRECAUTION WHEN USING TECHSTREAM

(a) When using the Techstream to troubleshoot the wireless door lock control system:

Connect the Techstream to the DLC3 while the power switch is off, and turn a door courtesy light switch on and off at 1.5-second intervals until communication between the Techstream and vehicle begins.

PARTS LOCATION

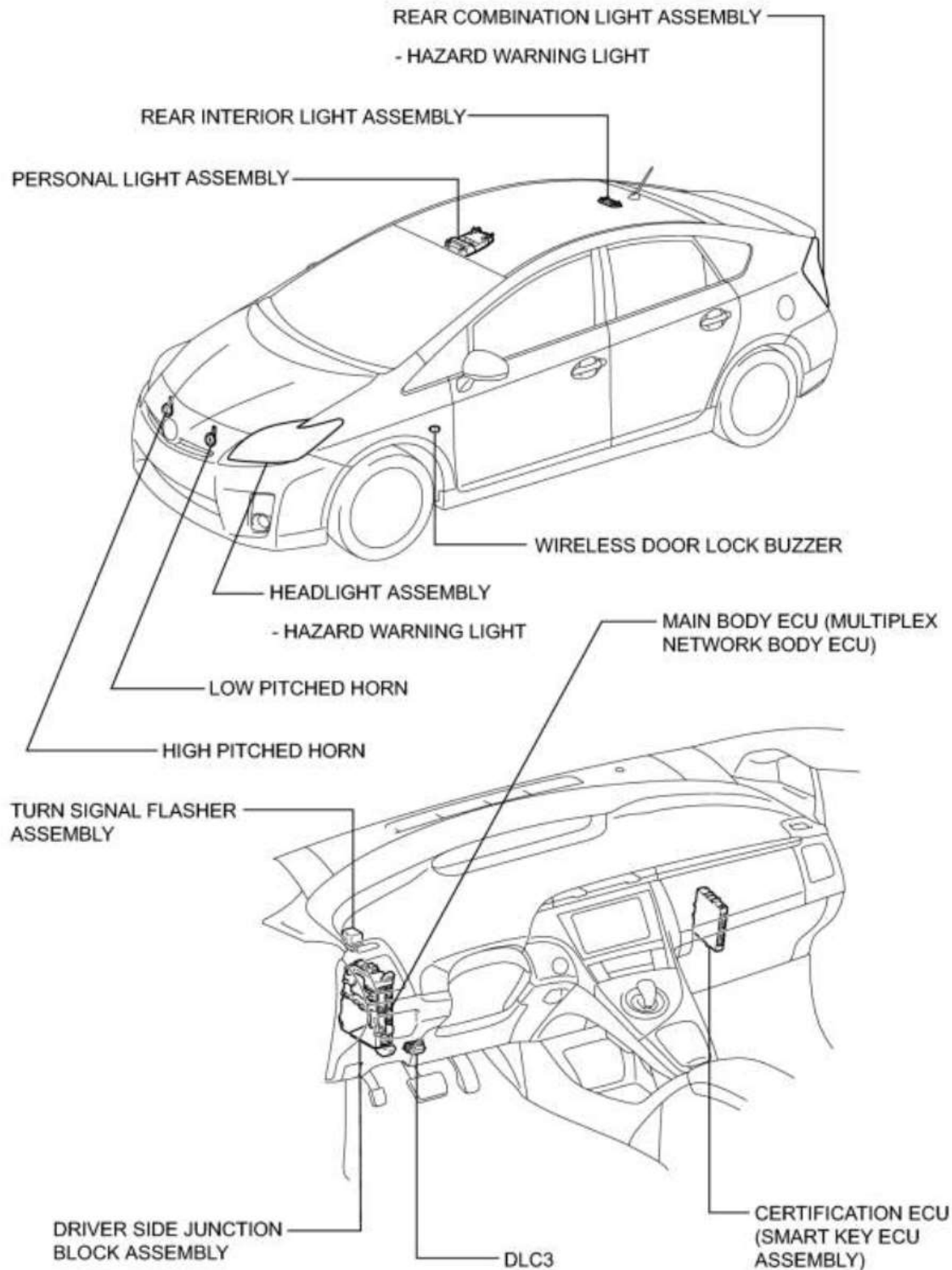
ILLUSTRATION



ILLUSTRATION

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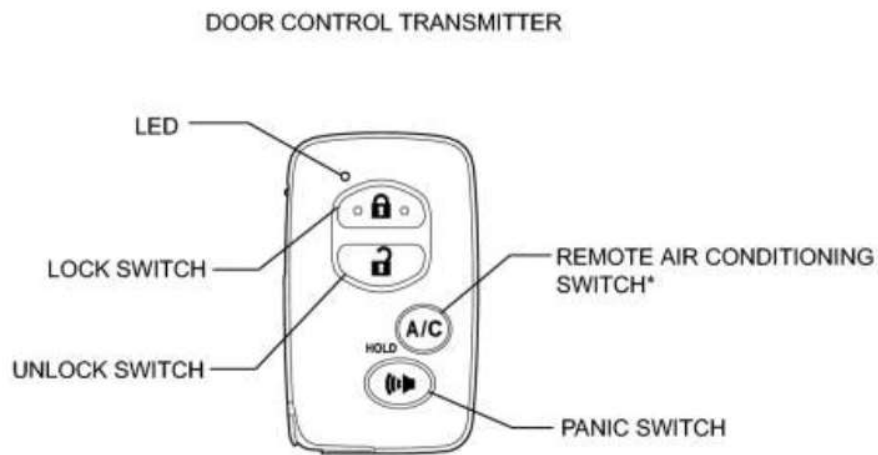


H

ILLUSTRATION

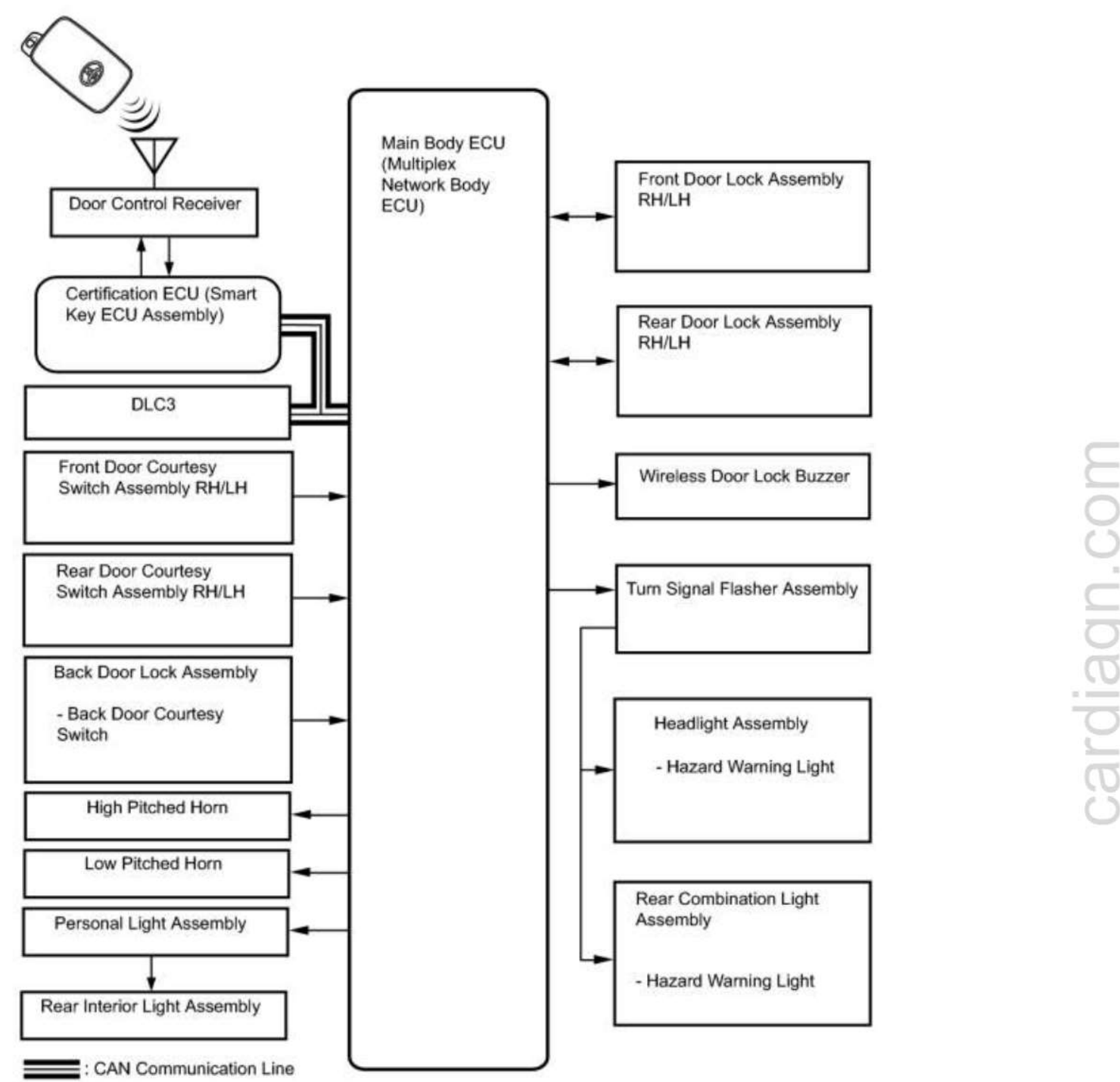
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*: w/ Remote Air Conditioning System

SYSTEM DIAGRAM



Communication Table

Transmitting ECU (Transmitter)	Receiving ECU (Receiver)	Signal	Line
Certification ECU	Main body ECU	Wireless door lock signal	CAN

Transmitting ECU (Transmitter)	Receiving ECU (Receiver)	Signal	Line
(Smart key ECU assembly)	(Multiplex network body ECU)		

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SYSTEM DESCRIPTION

1. WIRELESS DOOR LOCK CONTROL SYSTEM

The wireless door lock control system can be used to lock and unlock all doors from a distance. The system is controlled by a door control transmitter which sends radio waves to the door control receiver. The certification ECU (smart key ECU assembly) performs an ID code identification process and engages the door lock control.

2. FUNCTION OF MAIN COMPONENTS

Component	Function
Door control transmitter	- Has lock, unlock, remote air conditioning* and panic switches. - Transmits weak radio waves (recognition codes and function codes) to the door control receiver. - Illuminates indicator light (LED) during transmission.
Door control receiver	Receives weak radio waves from the door control transmitter and sends them to the certification ECU (smart key ECU assembly).
- Front door courtesy switch assembly LH/RH - Rear door courtesy switch assembly LH/RH - Back door courtesy switch	- Turns on when a door is opened and turns off when it is closed. - Outputs door status signals (open or closed) to the main body ECU (multiplex network body ECU).
- Front door lock assembly LH/RH - Rear door lock assembly LH/RH - Back door lock assembly	Transmits the door lock position of each door to the main body ECU (multiplex network body ECU).
Certification ECU (Smart key ECU assembly)	Sends wireless door lock control signals in response to the code data from the door control receiver and signals from each ECU.
Main body ECU (Multiplex network body ECU)	Receives wireless door lock signals from the certification ECU (smart key ECU assembly) and controls each door lock assembly

3. SYSTEM FUNCTION

The door control transmitter has the lock, unlock, and panic switches. Operating these switches activates each function.

The wireless door lock control system has the following functions:

HINT:

The default settings of the following functions are on. Part of these functions can be customized .

Function	Operation
----------	-----------

Function	Operation
All door lock	Pressing the lock switch locks all doors.
All door unlock (Unlock 2 operation)	Pressing the unlock switch twice within 3 seconds unlocks all doors after the driver door is unlocked.
Automatic lock	If none of the doors is opened within 60*1 or 30*2 seconds after they are unlocked by the wireless door lock control, all doors will lock again automatically.
Answer back	- When the doors are locked by wireless operation, the hazard warning lights flash once and wireless door lock buzzer sounds once. - When the doors are unlocked by wireless operation, the hazard warning lights flash twice and wireless door lock buzzer sounds twice.
Panic alarm	Pressing the panic switch of the transmitter for longer than about 0.8 seconds causes the following alarms to activate: - Sounds the horn. - Flashes the headlights*1, taillights*1 and hazard warning lights. - Illuminates the interior lights (when the switch is in the door position).*1 While the panic alarm is operating, pressing any switch of the transmitter cancels the alarm operation.
Remote air conditioning system*3	Holding air conditioning switch will cause air conditioning system and all doors lock.
Door ajar warning	The buzzer sounds for 10 seconds continuously when the lock switch is pressed when any of the doors are ajar. The buzzer stops when all doors are closed or the unlock switch is pressed.
Illuminated entry	When all doors are locked, pressing the unlock switch causes the interior lights to come on simultaneously with the unlock operation.

- *1: except for Korea
- *2: for Korea
- *3: w/ Remote Air Conditioning System

HOW TO PROCEED WITH TROUBLESHOOTING

HINT:

- The wireless door lock control system troubleshooting procedure is based on the premise that the power door lock control system is operating normally. Check the power door lock control system first before troubleshooting the wireless door lock control system. Use this procedure to troubleshoot the wireless door lock control system.
- *: Use the Techstream.

1. VEHICLE BROUGHT TO WORKSHOP

NEXT



2. CUSTOMER PROBLEM ANALYSIS

HINT:

- In troubleshooting, confirm that the problem symptoms have been accurately identified. Preconceptions should be discarded in order to make an accurate judgment. To clearly understand what the problem symptoms are, it is extremely important to ask the customer about the problem and the conditions at the time the malfunction occurred.
- Gather as much information as possible for reference. Past problems that seem unrelated may also help in some cases.
- The following 5 items are important points in the problem analysis:

What	Vehicle model, system name
When	Date, time, occurrence frequency
Where	Road conditions
Under what conditions?	Running conditions, driving conditions, weather conditions
How did it happen?	Problem symptoms

NEXT



3. INSPECT AUXILIARY BATTERY VOLTAGE

Standard Voltage:

11 to 14 V

If the voltage is below 11 V, recharge or replace the auxiliary battery before proceeding to the next step.

NEXT



4. CHECK FOR DTC*

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(a) Check for DTCs and note any codes that are output .

(b) Clear the DTCs.

(c) Recheck for DTCs. Based on the DTCs output above, try to force output of the same CAN communication system DTC or wireless door lock control system DTC by simulating the symptoms indicated by the DTC.

Result:

Result	Proceed to
DTC is not output.	A
CAN communication system DTC is output.	B
Wireless door lock control system DTC is output.	C

  GO TO CAN COMMUNICATION SYSTEM

  GO TO DIAGNOSTIC TROUBLE CODE CHART

A



5.	PROBLEM SYMPTOMS TABLE
----	------------------------

(a) Refer to Problem Symptoms Table .

Result:

Result	Proceed to
Fault is not listed in Problem Symptoms Table.	A
Fault is listed in Problem Symptoms Table.	B

 Go to step 7

A



6.	OVERALL ANALYSIS AND TROUBLESHOOTING*
----	---------------------------------------

(a) Operation Check 

(b) Terminals of ECU 

(c) Data List / Active Test 

NEXT



7.	REPAIR OR REPLACE
----	-------------------

NEXT



8.	CONFIRMATION TEST
----	-------------------

NEXT  **END**

OPERATION CHECK

1. NOTICE WHEN CHECKING FOLLOWING

(a) Wireless door lock/unlock function:

This wireless door lock control function operates only when the following 3 conditions are met:

- (1) The power switch is off.
- (2) All doors are closed.
- (3) The power door lock system is operating normally.

HINT:

The unlock function operates even when a door is open.

(b) The size of the wireless door lock control operational area differs depending on the situation.

- (1) The size of the operation area differs depending on the user and the way the transmitter is held.
- (2) In certain areas, the remote control function will only operate partially for the operational area, which will be reduced due to the vehicle body shape and the influence of the surrounding environment.
- (3) Since the transmitter uses weak radio waves, strong radio waves or electrical noise in the frequency used by the transmitter may reduce the size of the operational area and the remote control may not function.
- (4) When the transmitter battery is weak, the size of the operational area is reduced and the remote control may not function.

HINT:

If the door control transmitter has been left in a place that is exposed to direct sunlight, such as on the instrument panel, it may cause the battery to be weakened or cause other related problems.

2. CHECK WIRELESS DOOR LOCK CONTROL FUNCTIONS

HINT:

- The switches described in this text are the switches for transmitting signals. The switches are built into the door control transmitter.
- All the functions listed below must be checked in comparison with the remote control operational area.

- (a) Make sure that the vehicle is in an area that allows the wireless control function to operate.
- (b) Check basic functions.
 - (1) Check whether the LED of the transmitter comes on 3 times when each switch is pressed 3 times.

HINT:

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If the LED does not come on when the switch has been pressed 3 times or more, it may have a weak battery.

(2) Check that all doors lock when the lock switch is pressed.

(3) Check that the driver side door unlock when the unlock switch is pressed once, and unlocks all doors when pressed twice within 3 seconds.

(c) Check the chattering prevention function.

(1) Check that the corresponding operation occurs only once and is not repeated continuously while the switch is held. However, when the switch is operated repeatedly at 1-second intervals, check that the corresponding operation is carried out.

(d) Check the automatic locking function.

(1) Check that the doors relock automatically as long as none of the doors have been opened or all doors have not been locked within approximately 60*1 or 30*2 seconds after all doors are unlocked by pressing the unlock switch.

(2) Check that the automatic locking function does not operate when any door has been opened within approximately 60*1 or 30*2 seconds of unlocking the doors by pressing the unlock switch.

(3) Check that the automatic locking function does not operate when all doors have been locked manually (such as using key linked operation, or by pressing the lock switch) within approximately 60*1 or 30*2 seconds of unlocking the doors by pressing the unlock switch.

- *1: except for Korea
- *2: for Korea

(e) Check the switch operation fail-safe function.

(1) Check that the doors cannot be locked or unlocked by operating a switch on the unregistered transmitter, and that the doors are locked and unlocked by operating a switch on the registered transmitter.

(f) Check the door ajar warning function.

(1) Check that the wireless door lock buzzer sounds for approximately 10 seconds when the lock switch is pressed with any of the doors ajar or open.

(g) Check the repeat function.

(1) Check that all doors attempt to automatically lock once again 1 second after the lock switch has been pressed while the driver door control knob is being held in the unlock position.

(h) Check the answer-back function.

(1) When the lock switch is pressed, check that the hazard warning lights flash once and the buzzer sounds once simultaneously with the locking operation.

(2) When the unlock switch is pressed once, check that the hazard warning lights flash twice and the buzzer sounds twice simultaneously with the unlocking operation of the driver door.

(3) Check remote air conditioning answer back function* .

- *: w/ Remote Air Conditioning System

(i) Check the remote panic function.

(1) Check that the horn sounds, the headlights*1, taillights*1, hazard lights flash and the interior lights*1 remain on (when the light switch is turned to the door position) for 60*1 or 30*2 seconds by the theft alarm function, when the panic switch is held down for 0.8 seconds or more. Also, check that the horn stops sounding and the lights stop flashing when any switch of the transmitter is pressed.

- *1: except for Korea
- *2: for Korea

(j) Check the interior light on function .

(k) Check the remote air conditioning function .

CUSTOMIZE PARAMETERS

1. CUSTOMIZING FUNCTION WITH TECHSTREAM

HINT:

The following items can be customized.

NOTICE:

- When the customer requests a change in a function, first make sure that the function can be customized.
- Be sure to make a note of the current settings before customizing.
- When troubleshooting a function, first make sure that the function is set to the default setting.

2. CUSTOMIZE

(a) Connect the Techstream to the DLC3.

(b) Turn the power switch on (IG).

(c) Turn the Techstream on.

(d) Enter the following menus: Body Electrical / Main Body or Illuminated Entry / Utility / Customize.

(e) Select the setting by referring to the table below.

Wireless Door Lock Control System

Display (item)	Default	Function	Setting
Wireless Control	ON	Function that turns wireless door lock function on or off	ON or OFF
Hazard Answer Back	ON	When the doors are locked by wireless operation, the hazard warning lights flash once. When the doors are unlocked by wireless operation, the hazard warning lights flash twice.	ON or OFF
Open Door Warning	ON	The buzzer sounds when lock is pressed when any of the doors are ajar.	ON or OFF
Unlock 2 Operation	ON	Function that unlocks driver door when unlock switch on transmitter is pressed once, and unlocks all doors when pressed twice. If setting is OFF, pressing unlock switch once makes all doors unlock.	ON or OFF
Panic Function	ON	Function to operate theft deterrent system by continuously pressing panic switch on transmitter for 0.8 seconds	ON or OFF
Auto Lock Time	60 s*1 or 30 s*2	Function that regulates the interval between unlocking and automatic relocking of doors	30 s, 60 s or 120 s
Wireless Auto Lock	ON	This function turns the wireless auto lock function on or off.	ON or OFF

Display (item)	Default	Function	Setting
Wireless Buzzer Resp	ON	Wireless door lock buzzer response	ON or OFF
Wireless Buzzer Vol	Level7	Wireless door lock buzzer volume	Level7, Level6, Level5, Level4, Level3, Level2, Level1 or Level0

- *1: except for Korea
- *2: for Korea

Illuminated Entry

Display	Default	Content	Setting
Lighting Time	15 s	Changes the lighting time after closing all doors. (It will quickly fade out in case of turning the power switch from off to on (ACC or IG).)	7.5 s, 15 s or 30 s

PROBLEM SYMPTOMS TABLE

HINT:

- Use the table below to help determine the cause of problem symptoms. If multiple suspected areas are listed, the potential causes of the symptoms are listed in order of probability in the "Suspected Area" column of the table. Check each symptom by checking the suspected areas in the order they are listed. Replace parts as necessary.
- Inspect the fuses and relays related to this system before inspecting the suspected areas below.

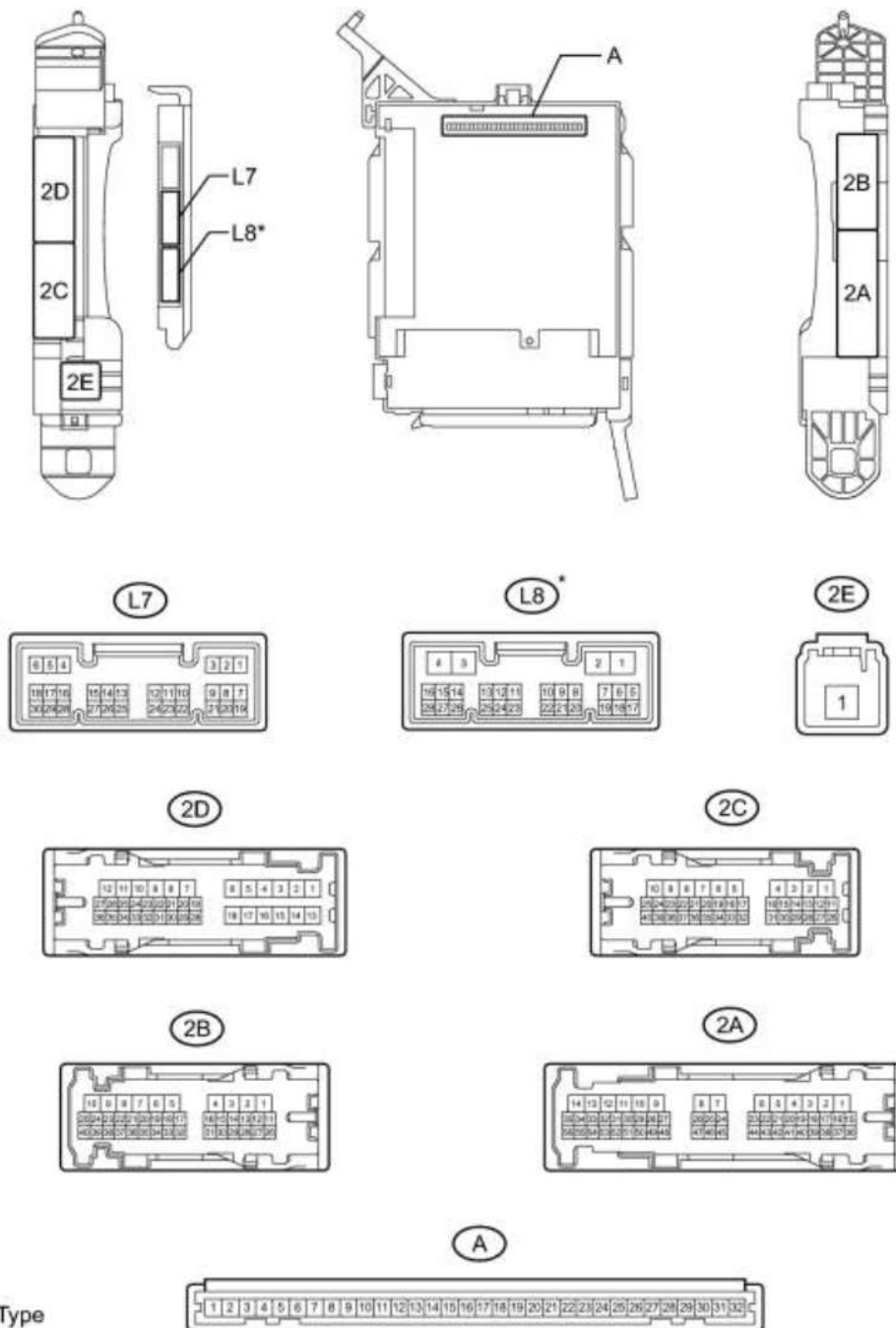
Wireless Door Lock Control System

Symptom	Suspected Area	See page
Wireless control function and entry function do not operate	Proceed to "All Door Entry Lock / Unlock Functions and Wireless Functions do not Operate"	INFO
Wireless control function does not operate but entry function operates	Electrical key transmitter	-
Only answer-back function does not operate normally	Proceed to "No-answer back"	INFO
Only automatic lock function does not operate normally	Perform operation check	INFO
	Lighting system (door courtesy light switch circuit)	INFO
	Main body ECU (multiplex network body ECU)	-
Only illuminated entry function does not operate	Perform operation check	INFO
	Lighting system (door courtesy light switch circuit)	INFO
	Main body ECU (multiplex network body ECU)	-
Only door ajar warning function does not operate	Perform operation check	INFO
	Lighting system (door courtesy light switch circuit)	INFO
	Main body ECU (multiplex network body ECU)	-
Panic alarm function does not operate	Perform operation check	INFO
	Lighting system (int) (interior lights)	INFO
	Lighting system (ext) (headlights, taillights, hazard warning lights)	INFO
	Theft deterrent system (vehicle horns, security horn)	-
	Main body ECU (multiplex network body ECU)	-
Remote air conditioning system does not operate	Proceed to "Air Conditioning System"	INFO

TERMINALS OF ECU

1. CHECK MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU) AND DRIVER SIDE JUNCTION BLOCK ASSEMBLY

(a) Disconnect the L8 main body ECU (multiplex network body ECU) connectors.



(b) Disconnect the A, 2B and 2C driver side junction block assembly connectors.

(c) Measure the voltage and resistance according to the value(s) in the table below.

HINT:

Measure the values on the wire harness side with the connectors disconnected.

Tester Connection	Wiring Color	Terminal Description	Condition	Specified Condition
2C-18 (BECU) - Body ground	Y - Body ground	Auxiliary battery power supply	Power switch off	11 to 14 V
A-31 (ALTB) - Body ground	-	Auxiliary battery power supply	Power switch off	11 to 14 V
A-32 (IG) - Body ground	-	Power switch power supply	Power switch on (IG)	11 to 14 V
A-32 (IG) - Body ground	-	Power switch power supply	Power switch off	Below 1 V
A-29 (ACC) - Body ground	-	ACC power supply	Power switch on (ACC)	11 to 14 V
A-29 (ACC) - Body ground	-	ACC power supply	Power switch off	Below 1 V
L8-3 (GND2) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω
2B-6 (GND1) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω

If the result is not as specified, there may be a malfunction in the wire harness.

(d) Reconnect the L8 main body ECU (multiplex network body ECU) connectors.

(e) Reconnect the A, 2B and 2C driver side junction block assembly connectors.

(f) Measure the voltage according to the value(s) in the table below.

Tester Connection	Wiring Color	Terminal Description	Condition	Specified Condition
2D-35 (FLCY) - Body ground	V - Body ground	Driver side door courtesy switch input	Driver side door open	Below 1 V
2D-35 (FLCY) - Body ground	V - Body ground	Driver side door courtesy switch input	Driver side door closed	11 to 14 V
2D-36 (FRCY) - Body ground	BR - Body ground	Front passenger side door courtesy switch input	Front passenger side door open	Below 1 V
2D-36 (FRCY) - Body ground	BR - Body ground	Front passenger side door courtesy switch input	Front passenger side door closed	11 to 14 V
L7-6 (LRCY) -	G - Body	Rear door LH and RH	Rear door LH or RH open	Below 1 V

Tester Connection	Wiring Color	Terminal Description	Condition	Specified Condition
Body ground	ground	courtesy light switch input		
L7-6 (LRCY) - Body ground	G - Body ground	Rear door LH and RH courtesy light switch input	Rear door LH or RH closed	11 to 14 V
L7-19 (BCTY) - Body ground	GR - Body ground	Back door courtesy light switch input	Back door open	Below 1 V
L7-19 (BCTY) - Body ground	GR - Body ground	Back door courtesy light switch input	Back door closed	11 to 14 V
L7-11 (L2) - Body ground	G - Body ground	Driver side door key-linked lock input	Driver side door key cylinder turned to lock	Below 1 V
L7-11 (L2) - Body ground	G - Body ground	Driver side door key-linked lock input	Driver side door key cylinder off	11 to 14 V
L7-24 (UL3) - Body ground	U - Body ground	Driver side door key-linked unlock input	Driver side door key cylinder turned to unlock	Below 1 V
L7-24 (UL3) - Body ground	U - Body ground	Driver side door key-linked unlock input	Driver side door key cylinder off	11 to 14 V
L7-9 (L1) - Body ground	LG - Body ground	Front passenger side door control switch input	Front passenger side door control switch locked	Below 1 V
L7-9 (L1) - Body ground	LG - Body ground	Front passenger side door control switch input	Front passenger side door control switch off	11 to 14 V
L7-10 (UL1) - Body ground	BR - Body ground	Front passenger side door control switch input	Front passenger side door control switch unlocked	Below 1 V
L7-10 (UL1) - Body ground	BR - Body ground	Front passenger side door control switch input	Front passenger side door control switch off	11 to 14 V
2B-3 (ACT+) - Body ground	LG - Body ground	Door lock motor lock drive output (all doors)	Multiplex network master switch (door control switch) or driver side door key cylinder off	Below 1 V
2B-3 (ACT+) - Body ground	LG - Body ground	Door lock motor lock drive output (all doors)	Multiplex network master switch (door control switch) or driver side door key cylinder locked	11 to 14 V
2B-5 (ACTD) - Body ground	B - Body ground	Driver side door lock motor unlock drive output	Multiplex network master switch (door control switch) or driver side door key cylinder off	Below 1 V
2B-5 (ACTD) - Body ground	B - Body ground	Driver side door lock motor unlock drive output	Multiplex network master switch (door control switch) or driver side door key cylinder unlocked	11 to 14 V
2B-1 (ACT-) - Body ground	B - Body ground	Door lock motor unlock drive output (except driver side)	Multiplex network master switch (door control switch) or driver side door key cylinder off	Below 1 V
2B-1 (ACT-) - Body ground	B - Body ground	Door lock motor unlock drive output (except driver side)	Multiplex network master switch (door control switch) or driver side door key cylinder unlocked	11 to 14 V
L7-18 (LSFR) - Body ground	LG - Body ground	Front passenger side door lock position switch input	Front passenger side door unlocked	Below 1 V

Tester Connection	Wiring Color	Terminal Description	Condition	Specified Condition
L7-18 (LSFR) - Body ground	LG - Body ground	Front passenger side door lock position switch input	Power switch off, all doors closed and front passenger side door locked	11 to 14 V
2D-25 (LSR) - Body ground	GR - Body ground	Rear door LH lock position switch input	Rear door LH unlocked	Below 1 V
2D-25 (LSR) - Body ground	GR - Body ground	Rear door LH lock position switch input	Power switch off, all doors closed and rear door LH locked	11 to 14 V
2B-29 (LSR) - Body ground	GR - Body ground	Rear door RH lock position switch input	Rear door RH unlocked	Below 1 V
2B-29 (LSR) - Body ground	GR - Body ground	Rear door RH lock position switch input	Power switch off, all doors closed and rear door RH locked	11 to 14 V
L7-7 (LSFL) - Body ground	GR - Body ground	Driver door lock position switch input	Driver door unlocked	Below 1 V
L7-7 (LSFL) - Body ground	GR - Body ground	Driver door lock position switch input	Power switch off, all doors closed and driver door locked	11 to 14 V
2C-23 (BZR) - Body ground	R - Body ground	Wireless door lock buzzer signal	Wireless door lock buzzer off	Below 1 V
2C-23 (BZR) - Body ground	R - Body ground	Wireless door lock buzzer signal	Wireless door lock buzzer on	Pulse generation
L7-3 (HAZ) - Body ground	Y - Body ground	Turn signal flasher relay signal	Any transmitter switch not pressed	11 to 14 V
L7-3 (HAZ) - Body ground	Y - Body ground	Turn signal flasher relay signal	Any transmitter switch pressed	Below 1 V

If the result is not as specified, the main body ECU (multiplex network body ECU) or driver side junction block assembly may have a malfunction.

2. CHECK CERTIFICATION ECU (SMART KEY ECU ASSEMBLY)



- Disconnect the L62 and L63 certification ECU (smart key ECU assembly) connectors.
- Measure the resistance and voltage according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Terminal Description	Condition	Specified Condition
L62-15 (E) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω
L62-1 (+B) - L62-15 (E)	B - W-B	Auxiliary battery power supply	Always	11 to 14 V
L62-16 (IG) - L62-15 (E)	BE - W-B	IG power supply	Power switch on (IG)	11 to 14 V
			Power switch off	Below 1 V

- If the result is not as specified, there may be a malfunction in the wire harness.

(c) Reconnect the L62 and L63 certification ECU (smart key ECU assembly) connectors.

(d) Measure the voltage according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Terminal Description	Condition	Specified Condition
L63-16 (RSSI) - L62-15 (E)	V - W-B	Door control receiver output signal	Power switch off, all doors closed and transmitter switch not pressed	11 to 14 V
			Power switch off, all doors closed and transmitter switch pressed	Below 2 V
L63-15 (RDA) - L62-15 (E)	Y - W-B	Door control receiver output signal	Power switch off	Pulse between 11 to 14 V occurs regularly
L63-5 (RC0) - L62-15 (E)	R - W-B	Supply battery to door control receiver	Power switch off, all doors closed and transmitter switch pressed	4.5 to 5.5 V

- If the result is not as specified, the certification ECU (smart key ECU assembly) may have a malfunction.

DIAGNOSIS SYSTEM

1. DESCRIPTION

The ECU stores trouble codes when malfunctions occur.

The diagnostic system allows for reading of the trouble codes from the DLC3.

Use the Techstream to help diagnose and repair the problem.

2. CHECK DLC3

(a) Check the DLC3 .

DTC CHECK / CLEAR

1. CHECK DTC

- (a) Connect the Techstream to the DLC3.
- (b) Turn the power switch on (IG).
- (c) Read the DTC by following the prompts on the Techstream screen.

HINT:

Refer to the Techstream operator's manual for further details.

2. CLEAR DTC

- (a) Connect the Techstream to the DLC3.
- (b) Turn the power switch on (IG).
- (c) Clear the DTC by following the directions on the Techstream screen.

HINT:

Refer to the Techstream operator's manual for further details.

DATA LIST / ACTIVE TEST

1. DATA LIST

HINT:

Using the Techstream to read the Data List allows the values or states of switches, sensors, actuators and other items to be read without removing any parts. This non-intrusive inspection can be very useful because intermittent conditions or signals may be discovered before parts or wiring is disturbed. Reading the Data List information early in troubleshooting is one way to save diagnostic time.

NOTICE:

In the table below, the values listed under "Normal Condition" are reference values. Do not depend solely on these reference values when deciding whether a part is faulty or not.

- (a) Connect the Techstream to the DLC3.
- (b) Turn the power switch on (IG).
- (c) Turn the Techstream on.
- (d) Enter the following menus: Body Electrical / Main Body / Data List.
- (e) Read the Data List according to the display on the Techstream.

Main Body (Main Body ECU (Multiplex Network Body ECU))

Tester Display	Measurement Item/Range	Normal Condition	Diagnostic Note
Wireless Control	Wireless door lock control function/ON or OFF	ON: Operating OFF: Not operating	-
Hazard Answer Back	Hazard answer-back of wireless/ON or OFF	ON: Operating OFF: Not operating	-
Wireless Auto Lock	Automatic lock function/ON or OFF	ON: Operating OFF: Not operating	-
Open Door Warning	Open door warning/ON or OFF	ON: Operating OFF: Not operating	-
Unlock 2 Operation	2 times operation of wireless unlock/ON or OFF	ON: All doors unlock when unlock switch pressed twice OFF: All doors unlock when unlock switch pressed once	-
Panic Function	Panic function/ON or OFF	ON: Operating	-

Tester Display	Measurement Item/Range	Normal Condition	Diagnostic Note
		OFF: Not operating	
Auto Lock Time	Automatic lock time/120 s, 60 s or 30 s	120 s: 120 seconds 60 s: 60 seconds 30 s: 30 seconds	-
Keyless Entry Buzzer	Buzzer answer-back of wireless/ON or OFF	ON: Operating OFF: Not operating	-

2. ACTIVE TEST

HINT:

Using the Techstream to perform Active Tests allows relays, VSVs, actuators and other items to be operated without removing any parts. This non-intrusive functional inspection can be very useful because intermittent operation may be discovered before parts or wiring is disturbed. Performing the Active Tests early in troubleshooting is one way to save diagnostic time. Data List information can be displayed while performing Active Tests.

- Connect the Techstream to the DLC3.
- Turn the power switch on (IG).
- Turn the Techstream on.
- Enter the following menus: Body Electrical / Main Body / Active Test.
- Perform the Active Test according to the display on the Techstream.

Main Body (Main Body ECU (Multiplex Network Body ECU))

Tester Display	Test Part	Control Range	Diagnostic Note
Hazard	Turn signal flasher relay	ON/OFF	Observe headlights and rear combination lights for correct operation
Illuminated Entry System	Interior lights and power switch light (Interior light switch is in the door position and all doors are closed)	ON/OFF	-
Wireless Buzzer	Wireless door lock buzzer	ON/OFF	-
Vehicle Horn	Vehicle horns	ON/OFF	-

DIAGNOSTIC TROUBLE CODE CHART

HINT:

If a trouble code is output during the DTC check, inspect the trouble areas listed for that code. For details of the code, refer to "See page" in the DTC chart.

Wireless Door Lock Control System

DTC Code	Detection Item	Trouble Area	See page
B1242	Wireless Door Lock Tuner Circuit Malfunction	1. Wire harness or connector 2. Door control receiver 3. Certification ECU (Smart key ECU assembly)	INFO

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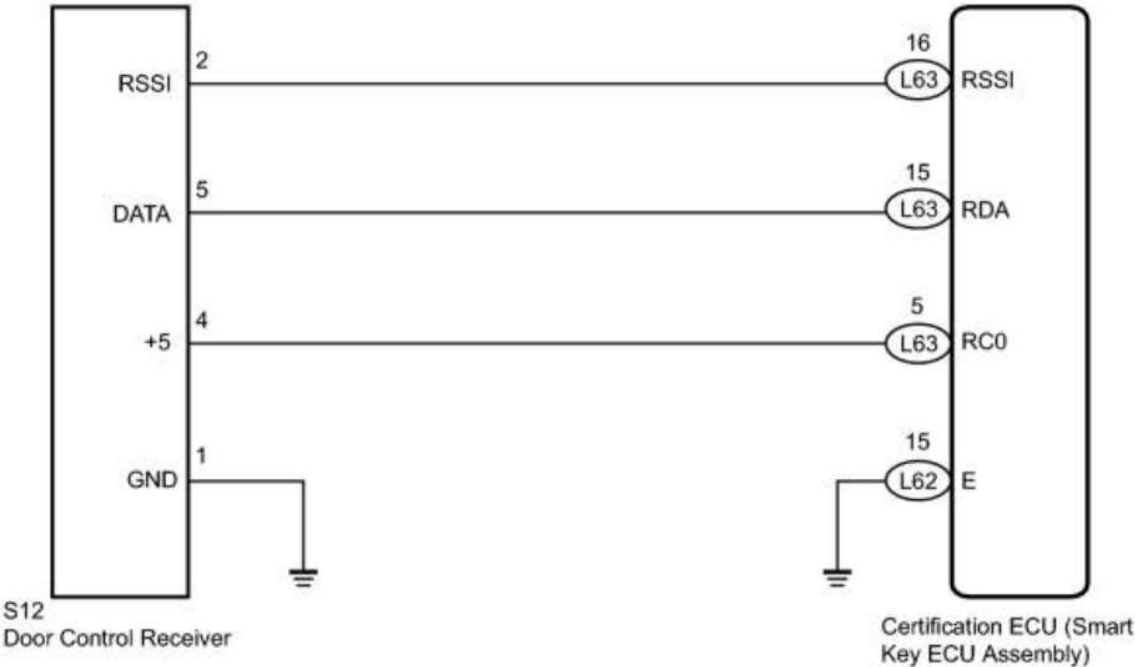
DTC	B1242	Wireless Door Lock Tuner Circuit Malfunction
-----	-------	--

DESCRIPTION

The door control receiver is used to receive electrical waves relating to the entry functions of the smart key system. The certification ECU (smart key ECU assembly) decodes the requested smart key system operation by identifying a key code based on the electric waves received via the door control receiver. The door control receiver receives a signal from the door control transmitter and sends signals to the main body ECU (multiplex network body ECU) through the certification ECU (smart key ECU assembly). The certification ECU (smart key ECU assembly) then sends a command, according to the requested operation, to each ECU (ex. if door lock operation is requested, the certification ECU (smart key ECU assembly) sends a door lock command to the main body ECU (multiplex network body ECU)).

DTC No.	DTC Detection Condition	Trouble Area
B1242	- Short in RDA or RSSI to ground between the certification ECU (smart key ECU assembly) and the door control receiver. - Short in RDA or RSSI to ground when RC0 (5 V) output from the ECU is off.	- Wire harness or connector - Door control receiver - Certification ECU (Smart key ECU assembly)

WIRING DIAGRAM



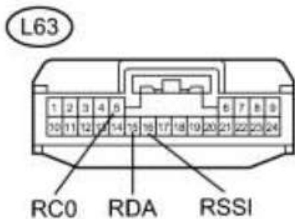
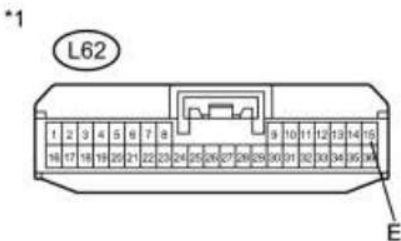
INSPECTION PROCEDURE

NOTICE:

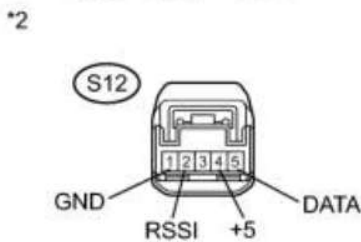
- When replacing or inspecting the door control receiver and wire harness, do not change the position or length of the wire harness. If the wire harness is too close to the door control receiver, entry and wireless function performance may be affected.
- Before performing the inspection, check that there are no problems related to the CAN communication system and LIN communication system.

PROCEDURE

1.	CHECK HARNESS AND CONNECTOR (DOOR CONTROL RECEIVER - CERTIFICATION ECU AND BODY GROUND)
----	---



(a) Disconnect the L62 and L63 certification ECU (smart key ECU assembly) connectors.



- (b) Disconnect the S12 door control receiver connector.
- (c) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
L63-16 (RSSI) - S12-2 (RSSI)	Always	Below 1 Ω
L63-15 (RDA) - S12-5 (DATA)	Always	Below 1 Ω

Tester Connection	Condition	Specified Condition
L63-5 (RC0) - S12-4 (+5)	Always	Below 1 Ω
L62-15 (E) - Body ground	Always	Below 1 Ω
S12-1 (GND) - Body ground	Always	Below 1 Ω
L63-16 (RSSI) or S12-2 (RSSI) - Body ground	Always	10 k Ω or higher
L63-15 (RDA) or S12-5 (DATA) - Body ground	Always	10 k Ω or higher
L63-5 (RC0) or S12-4 (+5) - Body ground	Always	10 k Ω or higher

Text in Illustration

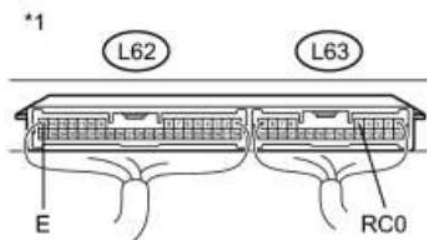
*1	Front view of wire harness connector (to Certification ECU (Smart Key ECU Assembly))
*2	Front view of wire harness connector (to Door Control Receiver)

NG REPAIR OR REPLACE HARNESS OR CONNECTOR

OK



2.	CHECK CERTIFICATION ECU (SMART KEY ECU ASSEMBLY)
----	--



(a) Reconnect the L62 and L63 certification ECU (smart key ECU assembly) connectors and the S12 door control receiver connector.

(b) Measure the voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Condition	Specified Condition
L63-5 (RC0) - L62-15 (E)	Power switch off, all doors closed and transmitter switch pressed	4.5 to 5.5 V

Text in Illustration

*1	Component with harness connected (Certification ECU (Smart Key ECU Assembly))
----	--

NG ► REPLACE CERTIFICATION ECU (SMART KEY ECU ASSEMBLY)

OK



3.	REPLACE DOOR CONTROL RECEIVER
----	-------------------------------

(a) Temporarily replace the door control receiver with a new one .

NEXT



4.	CHECK FOR DTC
----	---------------

(a) Clear the DTC .

(b) Recheck for DTCs.

OK:

DTC B1242 is not output.

NG ► REPLACE CERTIFICATION ECU (SMART KEY ECU ASSEMBLY)

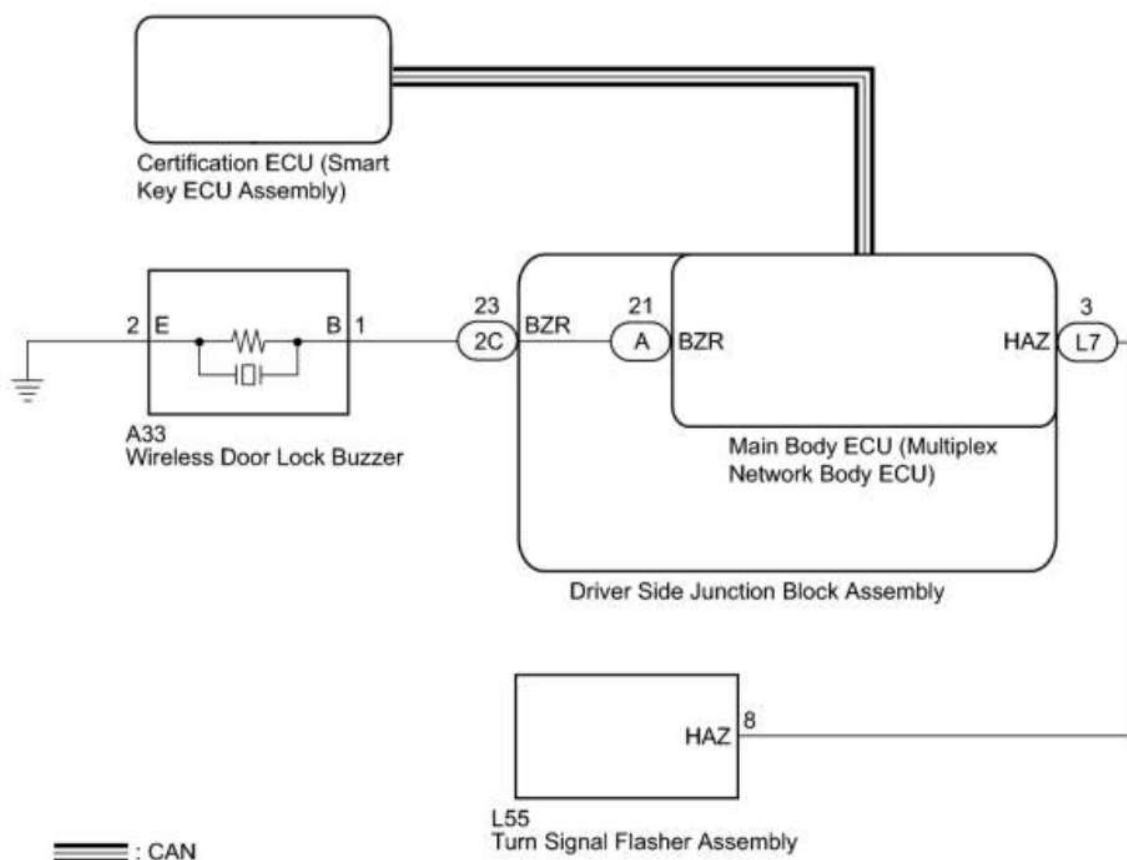
OK ► **END (DOOR CONTROL RECEIVER WAS DEFECTIVE)**

No Answer-Back

DESCRIPTION

In some cases, wireless door lock control functions are normal but the hazard warning light and/or wireless door lock buzzer answer-back function(s) does not operate. In such cases, the hazard warning light and wireless door lock buzzer signals output from the main body ECU (multiplex network body ECU) may be malfunctioning.

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

Troubleshooting should be started after confirming that the customize status of the answer-back function has been switched on.

PROCEDURE

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1. READ VALUE USING TECHSTREAM (ANSWER-BACK OPERATION)

- (a) Connect the Techstream to the DLC3.
- (b) Turn the power switch on (IG).
- (c) Turn the Techstream on.
- (d) Enter the following menus: Body Electrical / Main Body / Utility / Customize.
- (e) Select the setting by referring to the table below.

Wireless Door Lock Control System

Display (item)	Default	Function	Setting
Hazard Answer Back	ON	When the doors are locked by wireless operation, the hazard warning lights flash once. When the doors are unlocked by wireless operation, the hazard warning lights flash twice.	ON or OFF
Wireless Buzzer Resp	ON	Wireless door lock buzzer response on or off	ON or OFF

Result:

Result	Proceed to
Both items are on.	A
Either item is off.	B

B PERFORM CUSTOMIZE FUNCTION (ANSWER-BACK FUNCTION)

A

2. CHECK WIRELESS DOOR LOCK CONTROL FUNCTIONS

- (a) Check the wireless door lock control function by the electrical key transmitter.

Result:

Result	Proceed to
Wireless door lock/unlock operates normally.	A
Wireless door lock/unlock does not operate normally.	B

B GO TO SMART KEY SYSTEM

A



3. CHECK WIRELESS ANSWER-BACK OPERATION

(a) Check the wireless answer-back operation by wireless door lock control function.

Result:

Result	Proceed to
Only hazard warning light answer-back does not occur.	A
Only wireless door lock buzzer answer-back does not occur.	B

B [PERFORM ACTIVE TEST USING TECHSTREAM \(WIRELESS DOOR LOCK BUZZER\)](#)

A



4. CHECK HAZARD WARNING LIGHT OPERATION

(a) Check that the hazard warning lights flash continuously when the hazard warning signal switch is pressed.

OK:

Hazard warning lights flash continuously.

NG [GO TO LIGHTING SYSTEM](#)

OK



5. PERFORM ACTIVE TEST USING TECHSTREAM

(a) Connect the Techstream to the DLC3.

(b) Turn the power switch on (IG).

(c) Turn the Techstream on.

(d) Enter the following menus: Body Electrical / Main Body / Active Test.

(e) Perform the Active Test according to the display on the Techstream.

Main Body (Main Body ECU (Multiplex Network Body ECU))

Tester Display	Test Part	Control Range	Diagnostic Note
Hazard	Turn signal flasher relay	ON/OFF	Observe headlights and rear combination lights for correct operation

Result:

Result	Proceed to
Turn signal flasher relay does not turn on/off.	A
Turn signal flasher relay turns on/off.	B

B ▶ REPLACE MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU)

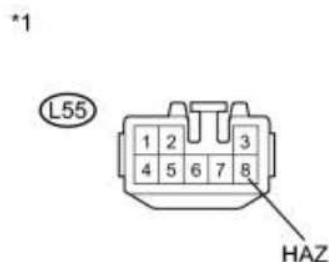
A

6.	CHECK HARNESS AND CONNECTOR (TURN SIGNAL FLASHER ASSEMBLY - MAIN BODY ECU)
----	--

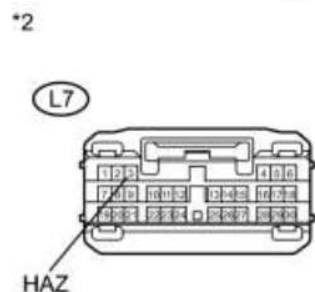
(a) Disconnect the L55 turn signal flasher assembly and L7 main body ECU (multiplex network body ECU) connectors.

(b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:



Tester Connection	Condition	Specified Condition
L55-8 (HAZ) - L7-3 (HAZ)	Always	Below 1 Ω
L55-8 (HAZ) - Body ground	Always	10 k Ω or higher



Text in Illustration

*1	Front view of wire harness connector (to Turn Signal Flasher Assembly)
*2	Front view of wire harness connector (to Main Body ECU (Multiplex Network Body ECU))

NG ▶ REPAIR OR REPLACE HARNESS OR CONNECTOR

OK ▶ REPLACE MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU)

7.	PERFORM ACTIVE TEST USING TECHSTREAM (WIRELESS DOOR LOCK BUZZER)
----	--

(a) Connect the Techstream to the DLC3.

(b) Turn the power switch on (IG).

(c) Turn the Techstream on.

(d) Enter the following menus: Body Electrical / Main Body / Active Test.

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(e) Perform the Active Test according to the display on the Techstream.

Main Body (Main Body ECU (Multiplex Network Body ECU))

Tester Display	Test Part	Control Range	Diagnostic Note
Wireless Buzzer	Turns the wireless door lock buzzer	ON/OFF	-

Result:

Result	Proceed to
Wireless door lock buzzer does not turn on/off.	A
Wireless door lock buzzer turns on/off.	B

B ▶ REPLACE MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU)

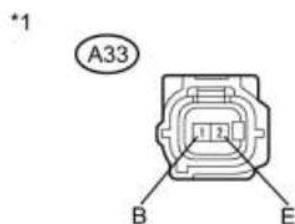
A

8.	CHECK HARNESS AND CONNECTOR (WIRELESS DOOR LOCK BUZZER - DRIVER SIDE JUNCTION BLOCK)
----	--

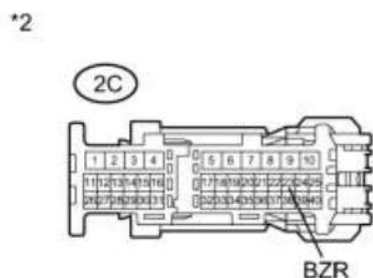
(a) Disconnect the A33 wireless door lock buzzer and 2C driver side junction block assembly connectors.

(b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:



Tester Connection	Condition	Specified Condition
A33-1 (B) - 2C-23 (BZR)	Always	Below 1 Ω
A33-2 (E) - Body ground	Always	Below 1 Ω
A33-1 (B) - Body ground	Always	10 k Ω or higher



Text in Illustration

*1	Front view of wire harness connector (to Wireless Door Lock Buzzer)
*2	Front view of wire harness connector (to Driver Side Junction Block Assembly)

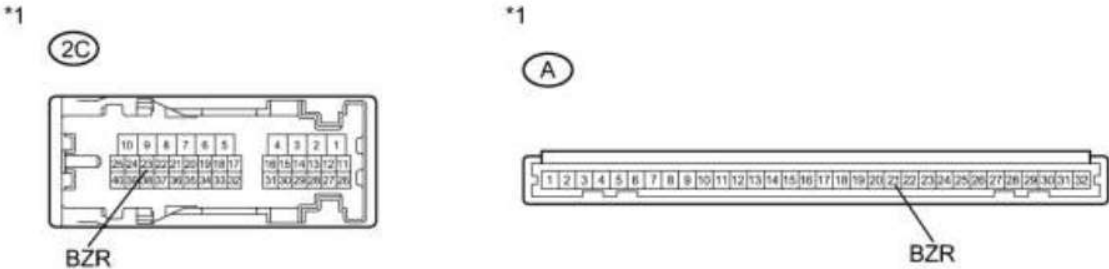
NG ▶ REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

9.

CHECK DRIVER SIDE JUNCTION BLOCK ASSEMBLY

(a) Remove the driver side junction block assembly INFO.



Text in Illustration

*1	Component without harness connected (Driver Side Junction Block Assembly)
----	--

(b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
2C-23 (BZR) - A-21 (BZR)	Always	Below 1 Ω

NG▶ REPLACE DRIVER SIDE JUNCTION BLOCK ASSEMBLY

OK



10.

REPLACE WIRELESS DOOR LOCK BUZZER

(a) Temporarily replace the wireless door lock buzzer with a new one INFO.

NEXT



11.

CHECK WIRELESS DOOR LOCK BUZZER OPERATION

(a) Check the operation of the wireless answer-back function.

OK:

Wireless answer-back function operates normally.

NG ► [REPLACE MAIN BODY ECU \(MULTIPLEX NETWORK BODY ECU\)](#)

OK ► **END (WIRELESS DOOR LOCK BUZZER WAS DEFECTIVE)**

12.	REPLACE MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU)
-----	--

(a) Temporarily replace the main body ECU (multiplex network body ECU) with a new one .

NEXT



13.	CHECK WIRELESS DOOR LOCK BUZZER OPERATION
-----	---

(a) Check the operation of the wireless function.

OK:

Wireless function operates normally.

NG ► REPLACE CERTIFICATION ECU (SMART KEY ECU ASSEMBLY)

OK ► **END (MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU) WAS DEFECTIVE)**